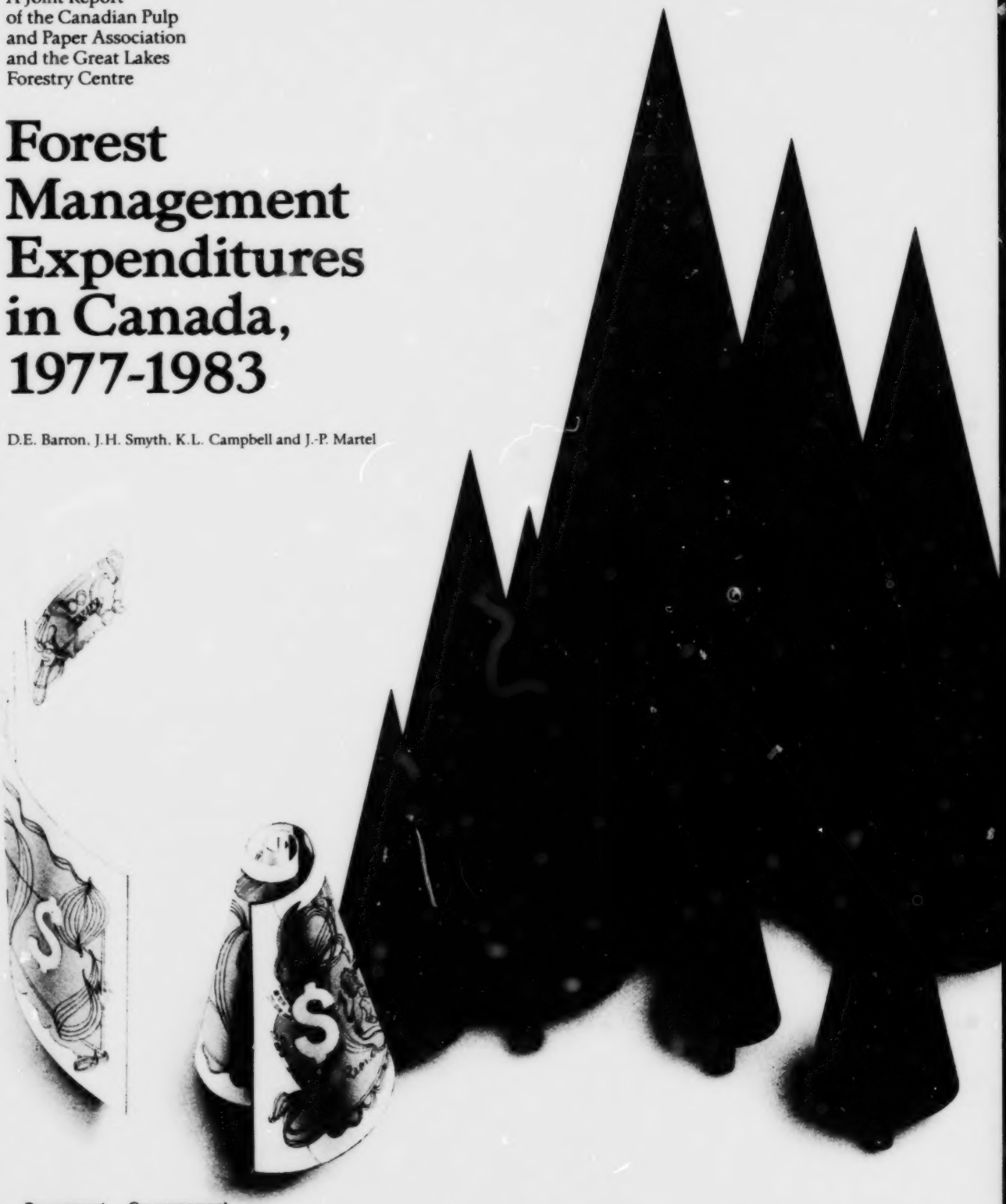
A Joint Report
of the Canadian Pulp
and Paper Association
and the Great Lakes
Forestry Centre

Forest Management Expenditures in Canada, 1977-1983

D.E. Barron, J.H. Smyth, K.L. Campbell and J.-P. Martel



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FOREST MANAGEMENT EXPENDITURES IN CANADA, 1977-1983

A JOINT REPORT OF

THE CANADIAN PULP AND PAPER ASSOCIATION

AND

THE GREAT LAKES FORESTRY CENTRE

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ABSTRACT

Expenditures in forest management activities are reported by governments and the forest industry for the years 1977, 1979, 1981 and 1983. Total expenditures by all agencies, on a national basis, increased from $660 million in 1977 to $1,248 million in 1983, an increase of 89%. However, most of the increase is inflationary; in real terms, total expenditures increased by 3.54% over the period, or at a real compound rate of .55% per year. This low rate is attributable to the recession of 1981-82 which resulted in substantial reductions in real growth between 1981 and 1983 in forest access and administration costs. There was also a significant drop in protection expenditures between those two reporting years. At the same time however, expenditures on silviculture in Canada increased from $118 million in 1977, to $336 million in 1983, an increase in real terms of 55% over the period, or 7.58% per year.

RESUME

On trouvera dans ce rapport les sommes d'argent engagées en aménagement forestier par les gouvernements et l'industrie forestière pour les années 1977, 1979, 1981 et 1983. Les gouvernements fédérale et provinciaux ainsi que l'industrie forestière, ont dépensé en aménagement forestier une somme globale de 660$ millions en 1977 par rapport à 1,248$ millions en 1983, ce qui représente une augmentation de 89%. Cependant, la majeure partie de cette augmentation est inflationniste. Les dépense totales n'ont en réalité augmenté que de 3,54% durant cette période, soit un taux d'augmentation réel composé de 0,55% par an. Ce faible pourcentage est dû à la récession de 1981-82. La récession engendra une réduction significative du taux de croissances des dépenses pour les routes d'accès et l'administration en plus d'une baisse importante des dépenses pour la protection des forêts. Durant cette même période, les dépenses en sylviculture au Canada sont passé de 168$ millions en 1977 à 336$ millions en 1983, une augmentation réelle de 55% pour cette période ou l'équivalent de 7,58% par année.

ACKNOWLEDGEMENTS

This report of forest management expenditures in Canada was a cooperative effort between the Canadian Pulp and Paper Association and the Canadian Forestry Service. Both agencies would like to extend their thanks to all provincial forest management agencies and member companies of the Canadian Pulp and Paper Association for their cooperation in providing the expenditure data required for this study.

INTRODUCTION

This report, a cooperative effort between the Canadian Pulp and Paper Association (CPPA) and the Canadian Forestry Service (CFS), is the fourth in a series of reports providing information pertaining to the level of funding for forest management activity by government and the forest industry in Canada. The first two previous reports were prepared by Reed and Associates Ltd. (1978, 1980), the third report was a joint report by the CFS and CPPA. The present report follows essentially the same format as that introduced in the first three, and summarizes the expenditures for the period 1977-1983.

The objective of this report is to summarize expenditures for selected categories of forest management in Canada on a provincial basis by provincial governments, the federal government and the forest industry for the period 1977-1983. Data from the new survey are analyzed and comparisons made with the last reported period (1981). Expenditures from earlier reporting period (1977 & 1979) are presented for reference purposes.

Forest management, for the purposes of this report, includes the whole range of activities from regeneration through to stand improvement, protection, research and support services, such as forest inventory and nursery infrastructure. Access roads are also included.

Data for this report were obtained from the provincial agencies responsible for forest management, the federal government, and member companies of the Canadian Pulp and Paper Association, and are reported on a provincial basis.

The section on public expenditures on forest management deals with expenditures by provincial governments and the federal government for the two fiscal years surveyed 1982/83 and 1983/84. For purposes of analysis, these two years are compared with 1981/82.

The section on industry expenditures covers the calendar year surveyed 1983. These data are compared with the last reported period 1981.

The summary of government and industry expenditures covers the years 1977, 1979, 1981 and 1983. For convenience and ease of comparison, fiscal-year data are reported on a calendar-year basis. For example, government expenditures for fiscal year 1977/78 are reported as 1977 calendar-year data in the final section.

The appendices provide data on expenditures on forest management by source and activity for each province for the fiscal years 1979/80, 1980/81, 1981/82, 1982/83 and 1983/84 for government, and for 1977, 1979, 1981 and 1983 for the forest industry.

PUBLIC EXPENDITURES ON FOREST MANAGEMENT

Introduction

Ninety percent, or 3.1 million km2, of Canada's forest land is classified as provincial crown land. The primary responsibility for forest management on these lands rests with the provinces. The remaining 10 percent, or .3 million km2, is under federal, private, and municipal ownership. Because of the provincial responsibility for the management of provincial crown lands, and the role of the federal government in forest research and development and the funding of forest management activities through federal-provincial agreements and other mechanisms, this section of the report sets out the level of expenditures by both governments on selected forest management activities.

Scope and Method

For purposes of reporting, public expenditures on forest management include the following seven broad categories of activity: silviculture, protection, resource access, forest inventory, research, timber management, and administration. Each provincial forestry agency contacted for information was requested to provide a breakdown of its forest management expenditures according to this format. For its silviculture and protection expenditures, further detail was requested. Expenditure data for silviculture was to be broken into the following selected components: regeneration, tending, site preparation, marking, and silvicultural support; expenditures on protection allocated to fire and pests. Of the ten provinces contacted, seven were able to provide the additional information requested (Appendix 2).

Expenditures made under federal-provincial forest resource development agreements were assigned to the appropriate management activity and, in the case of silviculture and protection, detailed according to the components described above.

The selection of management categories follows that used by Reed, et al. (1978) and subsequently by the authors in their previous reporting of management expenditures (Smyth, et al. 1984). The categories were retained for this report since they tend to accommodate, in the majority of cases, the different accounting procedures followed by the provinces, and provides some degree of continuity in examining expenditures over a period of time. A detailed breakdown of the various reporting elements within each management activity is found in Appendix 1.

The analysis of public forestry expenditures is based on information solicited from each provincial agency responsible for forest management, the Canadian Forestry Service of the Ministry of State (Forestry), the Department of Indian and Northern Affairs, and the Department of Regional Industrial Expansion.

Both published and unpublished data were used. In several provinces, agencies responsible for forest management also administer parks, wildlife, fisheries, tourism, mines, etc. Additionally, expenditures on forest management activities are not classified the same way in each jurisdiction and, therefore, some adjustments had to be made. Each provincial agency, when preparing data for this study, attempted to account for these problem areas and report the best information possible.

The expenditure data collected for this report cover the fiscal years 1982/83, and 1983/84. Tables detailing these expenditures for each province and the territories are found in Appendix 2. Tables 1 and 2 contain expenditure data for the five years 1977/78, 1979/80, 1981/82, 1982/83 and 1983/84. For purposes of analysis, however, 1981/82 is the base year to which expenditures made in 1982/83 and 1983/84 are compared. Appendix 2, in addition, provides public forest management expenditures for the fiscal years 1979/80, 1981/82.

Distribution of Public Expenditures by Province

Table 1 provides provincial and federal expenditures on forest management activities for 1977/78, 1979/80, 1981/82, 1982/83, and 1983/84.

For Canada as a nation, expenditures totalled approximately $970.8 million in 1982/83, dropping marginally to $967.5 million in 1983/84. The decrease in fiscal 1983/84 over 1982/83 is partially the result of less money expended on activities such as protection, as indicated in Tables 6 and 7. For the three years compared here, provincial expenditures as a proportion of total dollars spent ranged from 81% to 85%.

As expected, the greater share of provincial monies for forest management continued to be expended by the provinces of British Columbia, Alberta, Ontario, and Québec. Of total provincial expenditures, these four provinces accounted for 87%, 90%, and 90% in each of the three years, respectively.

Federal funds spent on forest management increased significantly (29%) from $142.7 million in 1981/82 to $183.6 million in 1983/84. The greater percentage of these funds were disbursed through federal-provincial forest resource development agreements and the regional forestry centres and national institutes of the Canadian Forestry Service. Approximately 60% of the total funds expended in each of the three years were spent in the provinces of New Brunswick, Québec, and Ontario. Total expenditures shown for Québec include administration expenditures of Canadian Forestry Service headquarters located in Hull, Québec. All forest management activity conducted in the Yukon Territory and Northwest Territories is funded by the federal government.

Table 1. Public expenditures on forest management for 1977/78, 1979/80, 1981/82, 1982/83, and 1983/84 by province.

Province	1977/78[a]			1979/80[a]			1981/82[a]		
	Provincial	Federal	Total[c]	Provincial	Federal	Total[c]	Provincial	Federal	Total[c]
	$000,000								
Newfoundland	6.4	11.3	17.7	7.1	8.6	15.7	13.3	8.2	21.5
Prince Edward Island	0.2	0.6	0.8	0.6	1.4	2.0	1.2	2.0	3.2
Nova Scotia	12.4	1.2	13.6	8.3	3.0	11.3	10.6	5.0	15.6
New Brunswick	16.1	10.5	26.6	18.3	12.4	30.7	26.7	14.5	41.2
Quebec	73.6	23.0	96.6	95.1	35.6[d]	130.7	106.5	46.7[d]	153.2
Ontario	86.9	10.8	97.7	106.2	11.5	117.7	176.3	24.3	200.6
Manitoba	6.3	-	6.3	9.5	1.3	10.8	15.7	-	15.7
Saskatchewan	7.7	0.6	8.3	13.2	3.3	16.5	34.0	2.4	36.4
Alberta	26.9	4.2	31.1	45.4	3.6	49.0	116.3	4.9	121.2
British Columbia	129.2	4.1	129.3	186.7	10.4	197.1	284.9	10.0	294.9
Subtotal	361.7	66.3	428.0	490.4	91.1	581.5	785.5	118.0	903.5
Yukon/NWT	-	10.5	10.5	-	12.2	12.2	-	24.7	24.7
Total[c]	361.7	76.8	438.5	490.4	103.3	593.7	785.5	142.7	928.2

Province	1982/83[b]			1983/84[b]		
	Provincial	Federal	Total[c]	Provincial	Federal	Total[c]
	$000,000					
Newfoundland	13.0	12.6	25.6	12.2	15.8	28.0
Prince Edward Island	1.7	2.1	3.8	1.6	2.0	3.6
Nova Scotia	12.0	2.0	14.0	14.3	4.3	18.6
New Brunswick	32.0	14.2[d]	46.2	31.9	17.6	49.5
Quebec	118.1	47.8	166.0	131.3	64.2[d]	195.5
Ontario	203.4	27.2	230.6	237.2	31.0	268.1
Manitoba	5.8	-	5.8	5.8	-	5.8
Saskatchewan	14.5	-	14.5	14.3	-	14.3
Alberta	122.7	5.8	128.5	64.6	7.3	72.0
British Columbia	296.9	11.6	308.4	270.7	14.3	284.9
Subtotal	820.0	123.3	943.3	783.9	156.5	940.4
Yukon/NWT	-	27.5	27.5	-	27.1	27.1
Total[c]	820.0	150.8	970.8	783.9	183.6	967.5

a Source: Smyth et al. (1984).
b Source: Appendix 2.
c Totals may not add due to rounding.
d $8.1 million, $17.3 million, $8.9 million, $14.1 million expended by Canadian Forestry Service Headquarters in Hull, Quebec, for each of the four respective years. Expenditures for 1977/78 are not known.

Distribution of Public Expenditures by Activity

Table 2 provides a national summary of public expenditures by the previously defined activities for the five fiscal years 1977/78, 1979/80, 1981/82, 1982/83, and 1983/84.

For Canada, expenditures on silviculture during the survey period amounted to $229.3 million in 1981/82, increasing to $274.0 million and $299.3 million in 1982/83, and 1983/84, respectively. This was an increase, in current dollars, of 31% over the three year period. The sharp decrease in total provincial protection expenditures from $240.2 million in 1982/83 to $182.1 million in 1983/84 is primarily due to a relaxed fire season in Alberta in 1983 as compared to 1982 and a $22.8 million reduction in protection costs in British Columbia. Monies expended on resource access decreased by $10 million to $92.5 million in 1982/83 over the previous year but increased to $107.8 million in 1983/84. Ninety-three percent of total public expenditures on road access in 1983/84 were in Québec, Ontario, and British Columbia. Nationally, funding for forest inventory decreased marginally during the three year period from $22.6 million in 1981/82 to $22.0 million in 1983/84. Combined federal and provincial expenditures during the period increased (although marginally) in the provinces of Newfoundland, Nova Scotia amd New Brunswick. In the remaining provinces, except Ontario, expenditures fluctuated; those of Ontario declined from $3.7 million in 1981/82 to $2.0 million in 1983/84. Research expenditures increased by 37% from $56.4 million 1981/82 to $77.2 million 1983/84. In each year, the federal government expended the greater share of funding on this activity. Monies expended on timber management (operational cruising, data collection, planning, etc.) increased 8% from $74.7 million in 1981/82 to $80.9 million in 1982/83 and declined to $77.9 million in 1983/84. The administration category, which is mainly overhead and support service for forest management activities, averaged approximately 18% of total dollars disbursed in each of the three years.

Distribution of Public Expenditures by Province and Activity

Tables 3, 4, 5, 6 and 7 provide summary information of public expenditures by province and activity for 1977/78, 1979/80, 1981/82, 1982/83, and 1983/84, respectively.

Silviculture for purposes of reporting consists mainly of the following activities: regeneration, site preparation, tending, marking, silvicultural support, etc. The greater percentage of silvicultural funding in all provinces was disbursed almost entirely on regeneration, related site preparation, and silvicultural support operations. Expenditures on each of the other silvicultural components remained minor. Extension forestry and assistance to the small private woodlot owner under various provincial programs are included in these estimates. Nationally, expenditures increased by 31%, or $70.0 million from $229.3

Table 2. Distribution of public expenditures on forest management for 1977/78, 1979/80, 1981/82, 1982/83 and 1983/84 by activity.

Activity	1977/78 [a]			1979/80 [a]			1981/82 [a]		
	Provincial	Federal	Total [c]	Provincial	Federal	Total [c]	Provincial	Federal	Total [c]
	$000,000								
Silviculture	83.5	18.6	102.1	115.7	26.9	142.6	195.6	33.7	229.3
Protection	90.5	6.2	96.7	125.8	11.2	137.0	262.8	22.5	285.3
Resource access	45.2	10.6	55.8	72.3	19.2	91.5	79.5	23.0	102.5
Inventory	13.6	0.8	14.4	13.7	1.4	15.1	20.8	1.8	22.6
Research	6.2	31.0	37.2	9.9	30.1	40.0	16.5	39.9	56.4
Timber management	-	-	-	43.1	2.9 [d]	46.0	71.6	3.1	74.7
Administration	121.8	10.5	132.3	110.0	11.5 [d]	121.5	138.8	18.6 [d]	157.4
Total [c]	360.8	77.7	438.5	490.5	103.2	593.7	785.6	142.6	928.2

Activity	1982/83 [b]			1983/84 [b]		
	Provincial	Federal	Total [c]	Provincial	Federal	Total [c]
	$000,000					
Silviculture	227.6	46.4	274.0	240.9	58.4	299.3
Protection	240.2	26.5	266.7	182.1	25.8	207.9
Resource access	74.8	17.7	92.5	87.1	20.7	107.8
Inventory	20.6	0.6	21.2	21.3	0.7	22.0
Research	17.5	46.2	63.7	18.3	58.9	77.2
Timber management	78.5	2.3 [d]	80.9	75.1	2.8 [d]	77.9
Administration	160.7	11.1 [d]	171.7	159.2	16.3 [d]	175.5
Total [c]	820.0	150.8	970.8	783.9	183.6	967.5

a Source: Smyth et al. (1984).
b Source: Appendix 2.
c Totals may not add due to rounding.
d $8.1 million, $17.3 million, $8.9 million, $14.1 million expended by Canadian Forestry Service Headquarters in Hull, Quebec, for each of the four respective years. Expenditures for 1977/78 are not known.

Table 3. Public expenditures on forest management by province and activity, 1977/78[a].

	Silviculture	Protection	Resource access	Inventory	Research[b]	Timber management	Admin. and Other	Total[c]
				$000,000				
Newfoundland	.9	2.3	4.0	0.2	1.8	-	8.5	17.7
Prince Edward Island	.6	-	-	-	-	-	0.2	0.8
Nova Scotia	2.5	1.3	1.4	0.4	0.3	-	7.7	13.6
New Brunswick	5.2	6.1	1.9	0.8	3.8	-	8.8	26.6
Quebec	23.1	22.1	16.7	4.2	9.3	-	21.2	96.6
Ontario[d]	31.2	29.5	8.4	1.0	11.6	-	16.0	97.7
Manitoba	0.9	3.5	0.9	0.4	-	-	0.6	6.3
Saskatchewan	2.4	2.9	1.5	0.6	-	-	0.9	8.3
Alberta	4.4	8.8	-	0.8	3.8	-	13.3	31.1
British Columbia	30.9	14.3	21.0	6.0	6.6	-	50.5	129.3
Subtotal	102.1	90.8	55.8	14.4	37.2	-	127.7	428.0
Yukon/N.W.T.	-	5.9	-	-	-	-	4.6	10.5
Total[c]	102.1	96.7	55.8	14.4	37.2	-	132.3	438.5

a Source: Smyth et al. (1984).
b Research includes Canadian Forestry Service expenditures.
c Totals may not add due to rounding.
d Source: Ont. Min. Nat. Resour., Toronto, Ont.

Table 4. Public expenditures on forest management by province and activity, 1979/80.

	Silviculture	Protection	Resource access	Inventory	Research	Timber management	Admin. and Other	Total[a]
				$000,000				
Newfoundland	.6	4.5	3.0	.9	2.1	.7	3.9	15.7
Prince Edward Island	1.3	.1	.1	-	.1	.1	.3	2.0
Nova Scotia	2.1	2.9	2.3	.5	.3	.9	2.2	11.3
New Brunswick	6.3	6.6	2.0	.4	5.3	1.8	8.3	30.7
Quebec	28.0	15.5	24.6	3.4	6.3	15.7	37.2	130.7
Ontario	41.9	30.0	11.2	1.3	13.3	12.5	7.5	117.7
Manitoba	2.1	6.0	.9	.5	-	.6	.7	10.8
Saskatchewan	3.8	5.4	4.0	1.6	-	.9	.8	16.5
Alberta	6.8	18.4	.9	1.0	3.6	.4	17.9	49.0
British Columbia	49.7	37.3	42.5	5.4	9.0	10.4	42.8	197.1
Subtotal	142.6	126.7	91.5	15.0	40.0	44.0	121.6	581.5
Yukon/N.W.T.	-	10.2	-	-	-	2.0	-	12.2
Total[a]	142.6	136.9	91.5	15.0	40.0	46.0	121.6	593.7

a Totals may not add due to rounding.

Source: Smyth et al. (1984).

Table 5. Public expenditures on forest management by province and activity, 1981/82.

	Silviculture	Protection	Resource access	Inventory	Research	Timber management	Administration	Total[a]
	$000,000							
Newfoundland	2.3	4.7	2.6	0.9	3.4	0.8	6.8	21.5
Prince Edward Island	1.7	0.1	0.1	0.3	0.3	0.2	0.5	3.2
Nova Scotia	4.7	3.4	2.6	0.5	0.3	1.9	2.2	15.6
New Brunswick	10.8	11.3	0.7	0.9	6.5	1.5	9.5	41.2
Quebec	40.1	20.5	25.7	3.9	7.7	17.4	37.9[b]	153.2
Ontario	79.2	47.9	25.2	3.7	17.5	16.2	10.9	200.6
Manitoba	1.3	11.6	0.6	0.6	-	0.9	0.7	15.7
Saskatchewan	3.3	26.4	2.6	1.9	-	0.9	1.3	36.4
Alberta	9.9	76.1	3.2	0.8	5.7	0.5	25.0	121.2
British Columbia	76.0	61.0	39.2	9.1	15.0	32.1	62.5	294.9
Sub-total	229.3	263.0	102.5	22.6	56.4	72.4	157.3	903.5
Yukon/Northwest Territories	-	22.3	-	-	-	2.4	-	24.7
Total[a]	229.3	285.3	102.5	22.6	56.4	74.8	157.3	928.2

[a] Totals may not add due to rounding.
[b] Includes $17.3 million expended by Canadian Forestry Service Headquarters in Hull, Quebec.

Source: Smyth et al. (1984).

Table 6. Public expenditures on forest management by province and activity, 1982/83.

	Silviculture	Protection	Resource access	Inventory	Research	Timber management	Administration	Total[a]
	$000,000							
Newfoundland	6.1	2.1	3.3	1.0	3.4	2.4	7.2	25.6
Prince Edward Island	2.1	.0[b]	0.2	0.1	0.2	0.5	0.8	3.8
Nova Scotia	3.9	3.1	1.3	0.7	0.4	0.5	4.0	14.0
New Brunswick	9.5	16.1	0.1	1.0	7.0	1.9	10.8	46.2
Quebec	47.2	27.7	21.9	4.5	8.9	22.1	33.6[c]	166.0
Ontario	89.4	42.9	40.9	2.5	20.7	15.0	19.2	230.6
Manitoba	1.6	2.1	0.5	0.6	.0[b]	0.8	0.1	5.8
Saskatchewan	3.2	8.8	.0[b]	1.3	0.1	0.6	0.5	14.5
Alberta	12.3	75.8	-	1.0	7.3	0.7	31.3	128.5
British Columbia	98.6	62.0	24.4	8.5	15.8	34.9	64.2	308.4
Sub-total	274.0	240.8	92.5	21.2	63.7	79.3	171.7	943.3
Yukon/Northwest Territories	-	25.9	-	-	-	1.6	-	27.5
Total[a]	274.0	266.7	92.5	21.2	63.7	80.9	171.7	970.8

[a] Totals may not add due to rounding.
[b] Due to rounding, expenditures less than $500,000 show as $ zero. See Appendix 2 for exact figures.
[c] Includes $8.9 million expended by Canadian Forestry Service Headquarters in Hull, Quebec.

Source: Appendix 2.

Table 7. Public expenditures on forest management by province and activity, 1983/84.

	Silviculture	Protection	Resource access	Inventory	Research	Timber management	Administration	Total[a]
	$000,000							
Newfoundland	7.3	1.9	4.6	1.3	4.3	2.5	6.1	28.0
Prince Edward Island	2.2	.0[b]	0.1	0.1	0.1	0.5	0.6	3.6
Nova Scotia	6.5	3.2	2.4	0.9	0.5	0.8	4.3	18.6
New Brunswick	11.7	14.7	0.1	1.4	8.7	2.4	10.6	49.5
Quebec	67.6	38.2	20.0	4.3	10.4	18.3	36.7[c]	195.5
Ontario	90.9	57.9	57.0	2.0	25.6	14.0	20.8	268.1
Manitoba	1.9	1.9	-	0.8	.0[b]	1.0	0.2	5.8
Saskatchewan	3.1	7.8	.0[b]	1.3	0.1	1.3	0.7	14.3
Alberta	12.7	17.9	-	0.5	9.7	0.7	30.5	72.0
British Columbia	95.5	39.2	23.7	9.4	17.7	34.5	65.0	284.9
Sub-total	299.3	182.6	107.8	22.0	77.2	76.0	175.5	940.4
Yukon/Northwest Territories	-	25.2	-	-	-	1.9	-	27.1
Total[a]	299.3	207.9	107.8	22.0	77.2	77.9	175.5	967.5

[a] Totals may not add due to rounding.

[b] Due to rounding, expenditures less than $500,000 show as $ zero. See Appendix 2 for exact figures.

[c] Includes $14.1 million expended by Canadian Forestry Service Headquarters in Hull, Quebec.

Source: Appendix 2.

in 1981/82 (Table 5) to $299.3 million in 1983/84 (Table 7). Despite the recessionary period of late 1981 through early 1983, there were increases in silvicultural expenditures in most provinces, notably Newfoundland, Nova Scotia, and Québec. Expenditures by these provinces in 1983/84 were up by at least half over what they were in 1981/82. Other significant increases were in Alberta and British Columbia.

The objective of the forest protection program in each of the provinces is to protect the forest from damage by wildfire and pests, especially insects and diseases. Expenditure on this activity tend to vary from year to year and from province to province, depending on the incidence of fire and pest problems. For the period of 1981/82 to 1983/84, protection costs consisted mainly of fire suppression in all provinces except New Brunswick and Manitoba, where insect problems were of primary concern. Expenditures for protection in the Yukon Territory and Northwest Territories were for fire suppression.

Expenditures for road access include expenditures on permanent roads, bridges, and other supporting infrastructure, as well as stumpage offsets in British Columbia. Most roads constructed by the provinces are multi-purpose and may be of a higher standard than would normally be required for harvesting, silviculture or protection purposes. Only two provinces, Newfoundland and Ontario, increased expenditures over the three year period. Saskatchewan and Alberta did not spend any monies on road systems in 1982/83 or 1983/84 while Quebec and British Columbia reduced their expenditures by a significant amount. Under federal-provincial forestry agreements, the federal government contributed approximately 20% of the funding for road programs during the three year period.

Expenditures on forest inventory vary considerably from year to year in each province, reflecting to some degree the priority each province puts on inventory analysis and interpretation, as well as the amount of field work necessary to keep inventories up to date. Over the three year period 1981/82 to 1983/84, expenditures on forest inventory averaged approximately $22.0 million annually, or 2.3% of total management expenditures. Quebec, Ontario, Saskatchewan, and British Columbia, combined, represented 82%, 79%, and 77% of total expenditures in each of the three years, respectively.

Forest research and development is undertaken by the federal government and most of the provincial governments. Of the total funds expended on research and development activities, 29%, 27% and 24% were disbursed by provinces in 1981/82, 1982/83, and 1983/84, respectively. The provinces of Québec, Ontario, Alberta, and British Columbia, combined, spent the greater share of the provincial funds expended, averaging about 93% of the total over the three year period (Appendix 2). The Canadian Forestry Service, the federal agency that conducts most of the forest research in Canada, spent directly $38.4 million, $44.9 million, and $57.8 million in each of the years 1981/82 through 1983/84, respectively (Appendix 2). Additional federal expenditures in research

were also made through federal-provincial forest resource development agreements, bringing the total federal contribution to $39.9 million, $46.2 million, and $58.9 million in each of the three years, respectively.

Timber management is basically a provincial responsibility. It includes operations such as cruising, cut inspections, and management planning. Over the three year period, provincial funding averaged approximately 9% of total provincial management expenditures.

Table 8 summarizes forest management expenditures for the period 1977/78 to 1983/84, excluding 1978/79. During the seven year period, total forest management expenditures for the country increased, in current dollars, from $438.5 million in 1977/78 to $967.5 million 1983/84, or by 121%. During this same period, provincial expenditures increased by 117% and those of the federal government by 139% (Smyth et al. (1984) and Appendix 2).

The expenditure information obtained from provincial forestry agencies, the Canadian Forestry Service and other federal departments, for the survey period 1982/83 and 1983/84, have been interpreted with care to avoid misleading generalizations. The seven categories to which management expenditures were assigned were chosen to provide a general perspective on the disbursement of funds for forest management, as well as to enable a trend of national and total provincial forest management expenditures to be established over a period of time. Due to differences in record-keeping among provinces, the expenditures assigned to each activity may not represent the total effort in each province or territory. Total figures, however, do represent the total effort, and activity variations are considered to be minor.

Table 8. Summary of public expenditures on forest management by province 1977/78 to 1983/84.

	1977/78[a]	1979/80[a]	1980/81[a]	1981/82[a]	1982/83[b]	1983/84[b]	% increase 1977/78--1983/84
	$000,000						
Newfoundland	17.7	15.7	16.1	21.5	25.6	28.0	58
Prince Edward Island	0.8	2.0	3.0	3.2	3.8	3.6	350
Nova Scotia	13.6	11.3	15.5	15.6	14.0	18.6	37
New Brunswick	26.6	30.7	34.7	41.2	46.2	49.5	86
Quebec	96.6	130.7	126.2	153.2	166.0	195.5	102
Ontario	97.7	117.7	182.7	200.6	230.6	268.1	174
Manitoba	6.3	10.8	20.7	15.7	5.8	5.8	-8
Saskatchewan	8.3	16.5	30.4	36.4	14.5	14.3	72
Alberta	31.1	49.0	83.3	121.2	128.5	72.0	132
British Columbia	129.3	197.1	267.9	294.9	308.4	284.9	120
Sub-total	428.0	581.5	780.6	903.5	943.3	940.4	197
Yukon/Northwest Territories	10.5	12.2	22.6	24.7	27.5	27.1	158
Total[c]	438.5	593.7	803.2	928.2	970.8	967.5	121

[a] Source: Smyth et al. (1984).
[b] Source: Appendix 2.
[c] Totals may not add due to rounding.

INDUSTRY EXPENDITURES ON FOREST MANAGEMENT

Introduction

Industrial expenditures on forest management fall into two broad categories. There are the expenditures for the management of private industrial forests and expenses that the industry incurs in the management of publicly owned provincial crown lands. The categories are not separated in this report since in most situations private and public lands are managed together as an integrated timber supply.

Private forest lands in Canada are approximately 8 percent of the total productive forest land area but have been estimated to supply 15 percent of the annual timber harvest. Much of the private forest is in small non-industrial holdings rather than in larger industrial tracts. Private lands are important sources of timber in Nova Scotia, New Brunswick, Prince Edward Island, in the southern parts of Québec, Ontario and British Columbia and in other parts of the country where large blocks of private lands were sold or ceded by the crown for development purposes.

Crown provincial lands play a dominant role in the industry's timber supply at approximately 85 percent and federal lands provide only 1 percent of the timber harvest.

The degree to which the industry participates in forest management on public lands varies considerably across the country. Generally speaking, the nature and extent of this participation is determined by the level to which forest management responsibility is delegated under the various agreements and tenures through which the industry secures its timber supply. In most provinces cutting rights on crown lands have been awarded to the industry under long-term licenses or leases covering extensive areas of land. Under many of these tenures, the licensee is responsible for those management practices which relate to the existing crop such as inventory, working plans, and cutting systems. These are usually subject to the approval of provincial forest authorities.

Under some tenures, the responsibility for reforestation and stand treatment has been retained by the province but usually the tenure agreement assigns responsibility for these treatments to the licensee. In some cases, the crown provides stumpage offsets or rebates to allow for cost recovery. Provincial audits are performed periodically to determine the extent and quality of these treatments. Favourable audits are a prerequisite for license renewal.

In addition to long-term licenses, a portion of the cutting rights on provincial lands are awarded in small parcels for shorter terms. In most cases, licensees under these short-term timber sales have no responsibility for management beyond the harvesting of the present crop in accordance with provincial utilization standards. In British Columbia and Alberta however, some short-term timber sales also require the licensee to be responsible for regeneration.

Survey of the Forest Industry

Industry's expenditures on forest management are reported under the categories of silviculture, forest protection, forest access and other forestry. The silviculture category is further subdivided into regeneration and stand tending. These categories of activities are described in detail in Appendix 1.

Since 1977 the Canadian Pulp and Paper Association (CPPA) has surveyed its member companies to determine the amount and cost of forest management work undertaken. The purpose was to track the changes in the levels of these efforts and expenditures. In 1977 and 1979 sector-wide estimates were made for CPPA by FLC Reed and Associates Ltd. (Reed, et al. 1978 and Reed, et al. 1980). In addition to the CPPA member company data, the remainder of the industry and provincial and federal expenditures were also included. This same procedure was followed in 1981 for the joint CFS/CPPA surveys and report "Forest Management Expenditures in Canada 1977 - 1981" (Smyth, et al. 1984).

In preparing the estimates of industrial expenditures, a detailed survey of CPPA member companies was conducted. This was combined with estimates of the remaining industry in each province.

Expenditures are reported in three ways; the gross expenditure by industry or an accounting of all dollars spent by companies; the money recovered from governments either as payment for work done or as offsets against stumpage; and the net dollars expended by industry. The latter is the combination of money spent on the management of private industrial lands and on public land but not recovered from government sources.

Reported in this section are the industrial expenditures over the period 1977 to 1983. Analyses and comparisons in the text are made only between 1981 and 1983 data since similar analyses between other reporting years can be found in earlier reports. Summary data for 1977 and 1979 are included in the tables for the readers convenient reference.

Distribution of Industry Expenditure by Province

Table 9 shows the distribution of forest management expenditures by industry for the years 1977, 1979, 1981 and 1983. Total expenditures for the year surveyed for this report - 1983 - are $396.7 million of which $116.4 million were recovered from government through direct payments or as stumpage offsets. This leaves a net industrial expense of $280.3 million. Gross and net expenditures are lower in current dollar terms than the 1981 level. These lower expenditures are also a departure from the upward real dollar expenditure trend of 1977 through 1981. The money recovered from government, however, have increased in 1983 over 1981.

Current and net industry expenditures are down from 1981 to 1983 in all provinces except Ontario and Alberta. This downward shift is attributable almost entirely to the recession in 1981 and 1982. Its effects carry over on specific forest management activities in 1983.

Table 9. Industry expenditures on forest management for 1977, 1979, 1981 and 1983 by province.

Province	1977 Gross Expenditures	1977 Recovered From Government	1977 Net Industry	1979 Gross Expenditures	1979 Recovered From Government	1979 Net Industry
	$000,000			$000,000		
Newfoundland	3.1	1.6	1.5	3.8	.2	3.6
Nova Scotia	5.9	.6	5.3	6.4	1.1	5.3
New Brunswick	11.2	.4	10.8	15.6	.9	14.7
Quebec	43.6	.2	43.4	51.8	3.5	48.3
Ontario	31.1	1.2	29.9	30.0	1.0	29.0
Manitoba	1.0	--	1.0	1.8	.2	1.6
Saskatchewan	3.1	.3	2.8	3.1	--	3.1
Alberta	13.1	.1	13.0	8.5	--	8.5
British Columbia	176.8	63.1	113.7	218.8	54.0	164.8
TOTAL [a]	288.9	67.7	221.2	339.8	60.9	278.9

Source: Reed and Associates Ltd. (1978)

Source: Reed and Associates Ltd. (1980)

Province	1981 Gross Expenditures	1981 Recovered From Government	1981 Net Industry	1983 Gross Expenditures	1983 Recovered From Government	1983 Net Industry
	$000,000			$000,000		
Newfoundland	8.3	.5	7.8	7.5	2.5	5.0
Nova Scotia	13.1	2.6	10.4	9.4	1.7	7.7
New Brunswick	21.7	1.0	20.7	16.8	3.2	13.6
Quebec	72.0	16.9	55.2	69.1	17.1	51.9
Ontario	45.1	16.1	29.0	61.2	28.4	32.8
Manitoba	2.8	.4	2.4	2.1	.5	1.6
Saskatchewan	4.8	--	4.8	1.9	--	1.9
Alberta	10.3	.1	10.2	16.9	.5	16.4
British Columbia	246.1	67.0	179.1	211.8	62.5	149.3
TOTAL [a]	424.2	104.6	319.6	396.7	116.4	280.3

Source: Canadian Pulp and Paper Association

Source: Canadian Pulp and Paper Association

a Totals may not add due to rounding.

Distribution of Industry Expenditures by Activity

Table 10 shows the distribution of industrial expenditures by category of activity for 1977 through 1983. The overall drop in gross and net industrial expenditures is attributed to the effects of the earlier recessionary period. This is most evident in the category of forest access which is most closely associated with harvesting. Gross expenditures on forest access have dropped from $224.7 million in 1981 to $170.3 million in 1983. The portion recovered from government decreased from $61.9 million to $48.5 million and the net was therefore reduced from $162.8 million to $121.8 million. Although timber harvest volumes had returned to a normal level in 1983, a large portion of the road system used that year had been developed earlier.

Forest protection costs vary from year to year depending on the incidence of fire and insect infestations. Industry's expenditures in this category were higher in 1983 than 1981, although government expenditures in this category decreased.

Gross silvicultural expenditures were up from a 1981 level of $79.8 million to $99.6 million in 1983 and the portion recovered from government had risen from $36.8 million to $63.0 million. The net industrial expenditure decreased from $43.0 million to $36.6 million.

The category of other forestry which is mainly administration, planning and support remained relatively unchanged between the two reporting years.

The changes in total dollars expended in these categories between 1981 and 1983 are influenced by conditions which differ from province to province.

Distribution of Net Industry Expenditures by Province and Activity

Table 11 outlines the net industry expenditures for each province by category and activity.

Net silvicultural expenditures are down in some regions and up in others. The total net is reduced from $43.0 million in 1981 to $36.6 million in 1983.

Forest protection costs are higher for industry in 1983 when they were at a level of $33.7 million compared to an expenditure of $26.3 million in 1981. The increases were in Quebec, Ontario, Alberta and British Columbia. In New Brunswick and Newfoundland expenses were at a reduced level.

Most of the total reduction in access expenditure from the 1981 level of $162.8 million to the 1983 expenditure of $121.8 million is the result of a $32.6 million decrease in outlays for roads in British Columbia.

Table 10. Distribution of industry expenditures on forest management for 1977, 1979, 1981 and 1983 by activity.

Activity	1977 Gross Expenditures	1977 Recovered From Government	1977 Net Industry	1979 Gross Expenditures	1979 Recovered From Government	1979 Net Industry
	$000,000			$000,000		
Regeneration	19.0	6.5	12.6	31.8	15.7	16.1
Stand Tending	6.0	2.3	3.7	11.4	5.2	6.2
Silviculture	25.0	8.8	16.3	43.2	20.9	22.3
Forest Protection	20.1	1.4	18.8	22.2	1.0	21.2
Forest Access	215.4	54.4	161.0	228.1	34.7	193.3
Other Forestry	28.2	3.0	25.2	46.3	4.2	42.1
TOTAL [a]	288.9	67.7	221.2	339.8	60.9	278.9

Source: Reed and Associates Ltd. (1978)

Source: Reed and Associates Ltd. (1980)

Activity	1981 Gross Expenditures	1981 Recovered From Government	1981 Net Industry	1983 Gross Expenditures	1983 Recovered From Government	1983 Net Industry
	$000,000			$000,000		
Regeneration	55.7	25.2	30.5	87.1	55.9	31.3
Stand Tending	24.1	11.6	12.6	12.4	7.1	5.3
Silviculture	79.8	36.8	43.0	99.5	63.0	36.6
Forest Protection	27.3	.9	26.4	36.4	2.6	33.7
Forest Access	224.7	61.9	162.8	170.3	48.5	121.8
Other Forestry	92.5	5.1	87.3	90.4	2.3	88.1
TOTAL [a]	424.2	104.6	319.6	396.7	116.4	280.3

Source: Canadian Pulp and Paper Association

Source: Canadian Pulp and Paper Association

a Totals may not add due to rounding.

Table 11. Distribution of industry expenditures on forest management by province and activity for 1977, 1979, 1981 and 1983.

Province	1977[a] Silvi-culture	Forest Protection	Forest Access	Other Forestry	TOTAL[c]	1979[a] Silvi-culture	Forest Protection	Forest Access	Other Forestry	TOTAL[c]
	$000,000					$000,000				
Newfoundland	--	.2	.6	.6	1.4	--	1.1	1.1	1.2	3.4
Nova Scotia	1.3	--	3.5	.5	5.3	1.8	--	2.8	.5	5.1
New Brunswick	2.7	3.7	2.8	1.5	10.7	4.1	2.7	3.4	4.4	14.6
Quebec	1.8	9.1	24.8	7.7	43.4	2.2	7.7	29.1	9.4	48.4
Ontario	0.7	2.5	23.1	3.4	29.7	0.4	3.4	20.8	4.3	28.9
Manitoba	--	--	.8	.2	1.0	--	--	1.1	.3	1.4
Saskatchewan	0.3	.1	2.1	.2	2.7	0.3	--	2.3	.4	3.0
Alberta	1.9	.9	8.6	1.6	13.0	1.9	1.0	4.3	1.2	8.4
British Columbia	7.4	2.1	94.7	9.4	113.6	11.2	5.0	128.3	20.3	164.8
TOTAL[c]	16.1	18.6	161.0	25.1	220.8	21.9	20.9	193.2	42.0	278.0

Province	1981[a] Silvi-culture	Forest Protection	Forest Access	Other Forestry	TOTAL[c]	1983[b] Silvi-culture	Forest Protection	Forest Access	Other Forestry	TOTAL[c]
	$000,000					$000,000				
Newfoundland	1.7	2.9	2.2	.9	7.7	1.3	1.7	1.2	.8	5.0
Nova Scotia	4.0	.3	3.5	2.6	10.4	3.1	.1	2.8	1.7	7.7
New Brunswick	7.1	4.3	2.2	7.1	20.7	3.8	1.8	3.7	4.3	13.6
Quebec	3.0	9.4	28.0	14.7	55.1	3.9	11.4	26.2	10.5	51.9
Ontario	1.2	4.4	18.4	5.1	29.1	4.6	7.3	14.3	6.5	32.8
Manitoba	--	--	1.8	.6	2.4	--	--	1.0	.6	1.6
Saskatchewan	0.7	--	3.7	.4	4.8	1.0	--	.4	.5	1.9
Alberta	2.9	.7	4.5	2.1	10.2	4.5	1.6	6.4	3.9	16.4
British Columbia	22.4	4.3	98.5	53.9	179.1	14.3	9.7	65.9	59.3	149.3
TOTAL[c]	43.0	26.3	162.8	87.4	319.5	36.6	33.7	121.8	88.1	280.3

a Smyth et al. (1984).
b See Appendix 3.
c Totals may not add due to rounding.

The industry's expenditures in the category of other forestry remain constant over the period, reflecting the economic effects of the recession.

In summary, Table 12 shows the total net industry expenditure by province for the years 1977, 1979, 1981 and 1983. The overall increase in current dollar terms is 27% for the period. Most categories of expenses are sensitive to economic conditions and although harvest volumes in 1983 were at normal levels the impact of the recession is still reflected in a slowdown in the rate of forest management activity increase.

More detailed information for each province may be found in Appendix 3.

Table 12. Summary of net industry expenditures on forest management by province 1977 to 1983.

Province	1977	1979	1981	1983	% increase 1977-1983
	----------	----------	$000,000	----------	
Newfoundland	1.4	3.4	7.7	5.0	257
Nova Scotia	5.3	5.1	10.4	7.7	45
New Brunswick	10.7	14.6	20.6	13.6	27
Quebec	43.4	48.4	55.1	51.9	20
Ontario	29.7	28.9	29.1	32.8	10
Manitoba	1.0	1.4	2.4	1.6	60
Saskatchewan	2.7	3.0	4.8	1.9	-30
Alberta	13.0	8.4	10.2	16.4	26
British Columbia	113.6	164.8	179.1	149.3	31
TOTAL [a]	220.8	278.0	319.4	280.3	27

a Totals may not add due to rounding.

Summary of Public and Industrial Expenditures on Forest Management

Total expenditures on forest management by provincial and federal governments and industry increased in current dollars from $660 million in 1977 to $1,248 million in 1983. In real terms (1), however, this represents only a 3.54% increase over the period, or a .55% compound annual rate of increase. The overall trend up to 1981 had been increasing at 4.75%.

The total expenditures estimated from surveys was found to be the same in 1983 as in 1981. In real terms, this is a decrease. The important category of silvicultural expenditures continued to increase in real terms over that period and at rates which would be expected as programs were expanded in response to perceived future timber supply constraints. Other categories, however, have not increased, or have increased at a slower rate.

The primary reason for lower expenditures in 1983 was the recession of 1981-1982. Harvesting was decreased from 155 million m3 in 1980, to 145 million m3 in 1981, to 127 million m3 in 1982, before returning to 157 million m3 in 1983. The recession had a negative impact on the categories of forest access and other forestry (mainly administrative) and a moderating effect on increases in silviculture and research. Protection costs were also down in 1983. The net effect is a level of forest management expenditure which was unchanged in total between 1981 and 1983 but up in the categories of silviculture and research.

Table 13 shows the distribution of provincial, federal and industrial expenditures within each province for 1977 to 1983, and Table 14 summarizes the distribution of expenditures by management category for provincial, federal and industrial sources. Table 15 presents the expenditures by categories for each province, and Tables 16, 17 and 18 compare the totals from 1977 to 1983 by province, by category and by source. In all tables the calendar, rather than fiscal year is used.

Total Expenditures

Silviculture

Expenditures on silviculture in Canada increased from $118 million in 1977 to $336 million in 1983. This is an increase of 184% in current dollar terms, and a real increase of 55% over the period, or a real rate of compound growth of 7.58%. Expenditures in all provinces have risen significantly and are expected to continue to do so at even greater rates in the future as the economy improves and new policies, agreements and expanded silvicultural programs take effect.

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(1) Implicit price index for government current expenditures on goods and services 1977 = 100.

Table 13. Public and industry expenditures on forest management for 1977, 1979, 1981 and 1983 by province.[a]

Province	1977				1979			
	Provincial	Federal	Industrial	Total[b]	Provincial	Federal	Industrial	Total[b]
	$000,000				$000,000			
Newfoundland	6.4	11.3	1.4	19.1	7.1	8.6	3.6	19.3
Prince Edward Island	0.2	0.6	0.0	0.8	0.6	1.4	0.0	2.0
Nova Scotia	12.4	1.2	5.3	18.9	8.3	3.0	5.3	16.6
New Brunswick	16.1	10.5	10.8	37.4	18.3	12.4	14.7	45.4
Quebec	73.6	23.0	43.4	140.0	95.1	35.6	48.3	179.0
Ontario	86.9	10.8	29.9	127.6	106.2	11.5	29.0	146.7
Manitoba	6.3	0.0	1.0	7.3	9.5	1.3	1.6	12.4
Saskatchewan	7.7	0.6	2.8	11.1	13.2	3.3	3.1	19.6
Alberta	26.9	4.2	13.0	44.1	45.4	3.6	8.5	57.5
British Columbia	125.2	4.1	113.7	243.0	186.7	10.4	164.8	361.9
Subtotal	361.7	66.3	221.3	649.3	490.4	91.1	278.9	860.4
Yukon/NWT	0.0	10.5	0.0	10.5	0.0	12.2	0.0	12.2
Total[b]	361.7	76.8	221.3	659.8	490.4	103.3	278.9	872.6

Province	1981				1983			
	Provincial	Federal	Industrial	Total[b]	Provincial	Federal	Industrial	Total[b]
	$000,000				$000,000			
Newfoundland	13.3	8.2	7.8	29.3	12.2	15.8	5.0	33.0
Prince Edward Island	1.2	2.0	0.0	3.2	1.6	2.0	0.0	3.6
Nova Scotia	10.6	5.0	10.4	26.0	14.3	4.3	7.7	26.3
New Brunswick	26.7	14.5	20.7	61.9	31.9	17.6	13.6	63.1
Quebec	106.5	46.7	55.2	208.4	131.3	64.2	51.9	247.5
Ontario	176.3	24.3	29.0	229.6	237.2	31.0	32.8	300.9
Manitoba	15.7	0.0	2.4	18.1	5.8	0.0	1.6	7.4
Saskatchewan	34.0	2.4	4.8	41.2	14.3	0.0	1.9	16.2
Alberta	116.3	4.9	10.2	131.4	64.6	7.3	16.4	88.4
British Columbia	284.9	10.0	179.1	474.0	270.7	14.3	149.3	434.2
Subtotal	785.5	118.0	319.6	1,223.1	783.9	156.5	280.3	1,220.7
Yukon/NWT	0.0	24.7	0.0	24.7	0.0	27.1	0.0	27.1
Total[b]	785.5	142.7	319.6	1,247.8	783.9	183.6	280.3	1,247.8

a Government figures are for fiscal years 1977/78, 1979/80, 1981/82 and 1983/84. These are reported here as 1977, 1979, 1981 and 1983.
b Totals may not add due to rounding.

Table 14. Distribution of public and industry expenditures on forest management activity for 1977, 1979, 1981 and 1983. [a]

Activity	1977				1979			
	Provincial	Federal	Industrial	Total [d]	Provincial	Federal	Industrial	Total [d]
	$000,000				$000,000			
Silviculture	83.5	18.6	16.3	118.4	115.7	26.9	22.3	164.9
Protection	90.5	6.2	18.7	115.4	125.8	11.2	21.2	158.2
Access [b]	45.2	10.6	161.0	216.8	72.3	19.2	193.3	284.8
Research [b]	6.2	31.0	0.0	37.2	9.9	30.1	0.0	40.0
Other [c]	135.4	11.3	25.2	171.9	166.8	15.8	42.1	224.7
Total [d]	360.8	77.7	221.2	659.7	490.5	103.2	278.9	872.6

Activity	1981				1983			
	Provincial	Federal	Industrial	Total [d]	Provincial	Federal	Industrial	Total [d]
	$000,000				$000,000			
Silviculture	195.6	33.7	43.1	272.4	240.9	58.4	36.6	335.9
Protection	262.8	22.5	26.4	311.7	182.1	25.8	33.7	241.6
Access	79.5	23.0	162.8	265.3	87.1	20.7	121.8	229.6
Research [b]	16.5	39.9	0.0	56.4	18.3	58.9	0.0	77.2
Other [c]	231.2	23.5	87.3	342.0	255.6	19.8	88.1	363.5
Total [d]	785.6	142.6	319.6	1,247.8	783.9	183.6	280.3	1,247.8

a Government figures are for fiscal years 1977/78, 1979/80, 1981/82 and 1983/84. These are reported here as 1977, 1979, 1981 and 1983.
b Research expenditures include only provincial and federal estimates.
c Other expenditures in this case include the 'inventory', 'timber management' and 'administration and other' categories of the public expenditures and the 'other forestry' category of the industrial expenditure.
d Totals may not add due to rounding.

Table 15. Public and industry expenditures on forest management by province and activity for 1977, 1979, 1981 and 1983.

Province	1977[a]	Silviculture	Protection	Access	Research	Other	Total[b]
				$000,000			
Newfoundland		0.9	2.5	4.6	1.8	9.3	19.1
Prince Edward Island		0.6	0.0	0.0	0.0	0.2	0.8
Nova Scotia		3.8	1.3	4.9	0.3	8.6	18.9
New Brunswick		7.9	9.8	4.7	3.8	11.1	37.3
Quebec		24.9	31.2	41.5	9.3	33.1	140.0
Ontario		31.9	32.0	31.5	11.6	20.4	127.4
Manitoba		0.9	3.5	1.7	0.0	1.2	7.3
Saskatchewan		2.7	3.0	3.6	0.0	1.7	11.0
Alberta		6.3	9.7	8.6	3.8	15.7	44.1
British Columbia		38.3	16.4	115.7	6.6	65.9	242.9
Subtotal		118.2	109.4	216.8	37.2	167.2	648.8
Yukon/NWT		0.0	5.9	0.0	0.0	4.6	10.5
Total[b]		118.2	115.3	216.8	37.2	171.8	659.3

a Public expenditures included in this table are for fiscal 1977/78.
b Totals may not add due to rounding.

Province	1979[a]	Silviculture	Protection	Access	Research	Other	Total[b]
				$000,000			
Newfoundland		0.6	5.6	4.1	2.1	6.7	19.1
Prince Edward Island		1.3	0.1	0.1	0.1	0.4	2.0
Nova Scotia		3.9	2.9	5.1	0.3	4.1	16.3
New Brunswick		10.4	9.3	5.4	5.3	14.9	45.3
Quebec		30.2	23.2	53.7	6.3	65.7	179.1
Ontario		42.3	33.4	32.0	13.3	25.6	146.6
Manitoba		2.1	6.0	2.0	0.0	2.1	12.2
Saskatchewan		4.1	5.4	6.3	0.0	3.7	19.5
Alberta		8.7	19.4	5.2	3.6	20.5	57.4
British Columbia		60.9	42.3	170.8	9.0	78.9	361.9
Subtotal		164.5	147.6	284.7	40.0	222.6	859.4
Yukon/NWT		0.0	10.2	0.0	0.0	2.0	12.2
Total[b]		164.5	157.8	284.7	40.0	224.6	871.6

a Public expenditures included in this table are for fiscal 1979/80.
b Totals may not add due to rounding.

Province	1981 [a]	Silviculture	Protection	Access	Research	Other	Total [b]
				$000,000			
Newfoundland		4.0	7.6	4.8	3.4	9.4	29.2
Prince Edward Island		1.7	0.1	0.1	0.3	1.0	3.2
Nova Scotia		8.7	3.7	6.1	0.3	7.2	26.0
New Brunswick		17.9	15.6	2.9	6.5	19.0	61.9
Quebec		43.1	29.9	53.7	7.7	73.9	208.3
Ontario		80.4	52.3	43.6	17.5	35.9	229.7
Manitoba		1.3	11.6	2.4	0.0	2.8	18.1
Saskatchewan		4.0	26.4	6.3	0.0	4.5	41.2
Alberta		12.8	76.8	7.7	5.7	28.4	131.4
British Columbia		98.4	65.3	137.7	15.0	157.6	474.0
Subtotal		272.3	289.3	265.3	56.4	339.7	1,223.0
Yukon/NWT		0.0	22.3	0.0	0.0	2.4	24.7
Total [b]		272.3	311.6	265.3	56.4	342.1	1,247.7

a Public expenditures included in this table are for fiscal 1981/82.
b Totals may not add due to rounding.

Province	1983 [a]	Silviculture	Protection	Access	Research	Other	Total [b]
				$000,000			
Newfoundland		8.6	3.6	5.8	4.3	10.7	33.0
Prince Edward Island		2.2	0.0	0.1	0.1	1.2	3.6
Nova Scotia		9.6	3.3	5.2	0.5	7.7	26.3
New Brunswick		15.5	16.6	3.8	8.7	18.7	63.1
Quebec		71.5	49.6	46.2	10.4	69.8	247.4
Ontario		95.5	65.2	71.3	25.6	43.3	300.9
Manitoba		1.9	1.9	1.0	0.0	2.6	7.4
Saskatchewan		4.1	7.8	0.4	0.1	3.8	16.2
Alberta		17.2	19.5	6.4	9.7	35.6	88.4
British Columbia		109.8	48.9	89.6	17.7	168.2	434.2
Subtotal		335.9	216.3	229.6	77.2	361.6	1,220.7
Yukon/NWT		0.0	25.3	0.0	0.0	1.9	27.1
Total [b]		335.9	241.6	229.6	77.2	363.5	1,247.8

a Public expenditures included in this table are for fiscal 1983/84.
b Totals may not add due to rounding.

Table 16. Summary of total forest management expenditures by province.[a]

Province	1977	1979	1981	1983	% Increase 1977-1983
			$000,000		
Newfoundland	19.1	19.3	29.3	33.0	73
Prince Edward Island	0.8	2.0	3.2	3.6	350
Nova Scotia	18.9	16.6	26.0	26.3	39
New Brunswick	37.4	45.4	61.9	63.1	69
Quebec	140.0	179.0	208.4	247.5	77
Ontario	127.6	146.7	229.6	300.9	136
Manitoba	7.3	12.4	18.1	7.4	1
Saskatchewan	11.1	19.6	41.2	16.2	47
Alberta	44.1	57.5	131.4	88.4	100
British Columbia	243.0	361.9	474.0	434.2	79
Subtotal	649.3	860.4	1,223.1	1,220.7	88
Yukon/NWT	10.5	12.2	24.7	27.1	158
Total[b]	659.8	872.6	1,247.8	1,247.8	89

a Calendar year is used rather than fiscal year.
b Totals may not add due to rounding.

Table 17. Summary of total forest management expenditures by category.[a]

Activity	1977	1979	1981	1983	% Increase 1977-1983
			$000,000		
Silviculture	118.2	164.5	272.3	335.9	184
Protection	115.3	157.8	311.6	241.6	109
Access	216.8	284.7	265.3	229.6	6
Research	37.2	40.0	56.4	77.2	108
Other	171.8	224.6	342.1	363.5	111
Total[b]	659.3	871.6	1,247.7	1,247.8	89

a Calendar year is used rather than fiscal year.
b Totals may not add due to rounding.

Table 18. Summary of forest management expenditures by source.[a]

Source	1977	1979	1981	1983
			$000,000	
Provincial	361.6	490.4	785.5	783.9
Federal	76.8	103.3	142.7	183.6
Industry	221.3	278.9	319.6	280.3
Total[b]	659.8	872.6	1,247.8	1,247.8

a Calendar year is used rather than fiscal year.
b Totals may not add due to rounding.

Forest Protection

Annual expenditures on forest protection vary considerably, depending on environmental factors and natural cyclical insect population patterns. In general, there is a long term trend to greater levels of protection of the resource because of the need to conserve the mature forest in order to bridge the timber supply requirements through to the harvest of the new forest. Specifically, there is a decrease in these expenditures in 1983 to $242 million from $312 million in 1981.

The overall increase of $115 million in 1977 to $242 million in 1983, is a real increase of 15%, which should be considered conservative because of the low level of expenditures in 1983.

Forest Access

Forest access expenditures decreased over the period 1979, 1981 and 1983. In current dollars the expenditures in 1983 were similar to those of 1977, which means a decrease in real dollar terms. The decrease in 1981 and 1983 can be attributed to the recession of 1981 and 1982, resulting in smaller harvests and some harvesting in areas where primary roads were built earlier.

Research and Development

Expenditures on forest research and development increased from $37 million in 1977 to $77 million in 1983. This is an increase in real terms of 14% over the six year period, and 2.2% per annum. The increase between 1981 and 1983 is an increase of 6.7% in real terms.

Other Forestry

Expenditures on forest management planning, administration and support increased from $172 million in 1977 to $364 million in 1983. This is a real increase of 16% over the period, and 2.5% annually.

Provincial Expenditures

Total expenditures by provincial governments increased from $361 million in 1977 to $784 million in 1983. This is a real increase of 19% over the period, or 2.9% per annum. Within the total there is an increase in silvicultural expenses by the province from $84 million in 1977 to $241 million in 1983 or real increases of 57% overall and 7.8% annually. At the same time, other forest management categories were up or down marginally due to business cycles and variable forest protection requirements.

Federal Expenditures

Federal expenditures on forest management have risen steadily from $78 million in 1977, to $184 million dollars in 1983. The real increase is 29% overall, or 4.4% annually. Federal expenditures on silviculture have increased at a greater real rate of 9.4% per year. The new and expanded federal provincial agreements are only beginning to be accounted for in these estimates. The rate of increase is expected to continue into subsequent reporting periods.

Industry Expenditures

Industry expenditures increased from $221 million in 1977, to $280 million in 1983. The 1983 expenditures are approximately $40 million below the 1981 figures which is totally accounted for in the reduction of expenditures on forest access from $161 million in 1977, to $122 million in 1983. This is explained by the recession, a reduction in harvest, and permanent road construction. In most other categories, industry's expenditures remain relatively constant over the two year period.

Over the period 1977 to 1983, industry's expenditures have decreased by 31%. Excluding the access category, the remaining categories increased by 6.3% annually in real terms.

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APPENDICES

APPENDIX 1

FOREST MANAGEMENT EXPENDITURE CATEGORIES

FOREST MANAGEMENT ACTIVITY DEFINITIONS

GOVERNMENT

ACTIVITY	COMPONENT	ELEMENTS
SILVICULTURE	Regeneration	Planting--bareroot; planting--containers; seeding--direct; seeding with site preparation; scarification; strip cutting, shelterwood cutting; clear-cutting
	Tending	Cleaning--manual; cleaning--chemical, aerial; ground; cleaning--mechanical; thinning and improvement cuts; pruning; fertilization, cultivation, drainage
	Site Preparation	Site preparation--mechanical; site preparation--chemical; site preparation--prescribed burn
	Marking	Marking--for regeneration; marking--for tending; marking--for site preparation
	Silvicultural support	Seed collection; tree improvement; provincial stock production--container and bareroot; seed plant operations; purchased growing stock
PROTECTION	Fire	
	Pests	
RESOURCE ACCESS	Capital	All road systems--primary and secondary and tertiary roads (including bridges) paid for by the managing agency
	Maintenance	All monies expended to maintain the existing forest access road system
INVENTORY		Photography, interpretation, inventory cruising, compilation, drafting
RESEARCH		Total research expenditures in support of forest management
TIMBER MANAGEMENT		Operational cruising, cut and postcut inspections, management planning
ADMINISTRATION		Total administration expenditures in support of the above forest management expenditures

INDUSTRY

ACTIVITY	COMPONENT	ELEMENTS
SILVICULTURE	REGENERATION	
	Site preparation for natural regeneration	- scarification - prescribed burning - chemical - other
	Site preparation for artificial regeneration	- scarification - prescribed burning - chemical - other
	Artificial regeneration	- planting bare root - planting containers - seed
	Modified cutting for regeneration	
	Silviculture support	- regeneration and survival surveys - tree improvement
	STAND TENDING	- cleaning manual - cleaning chemical (aerial) - cleaning chemical (ground) - precommercial thinning and spacing - commercial thinning - pruning - fertilization - cultivation - drainage
FOREST PROTECTION	Fire	- direct cost for prevention - direct cost for suppression - shared cost assessment - area protection charges
	Insect and/or disease control	- direct cost - shared assessment - area protection charges
FOREST ACCESS	Road construction	
OTHER FORESTRY	Forest inventory Forest research Administration in support of forest management Other expenditures	

GOVERNMENT AND INDUSTRY

ACTIVITY[a]	PUBLIC[b]	INDUSTRY[c]
SILVICULTURE	Silviculture	silviculture
PROTECTION	Protection	forest protection
ACCESS	Resource access	forest access
RESEARCH	Research	
OTHER	Inventory Timber management Administration	other forestry

a Forest management activities as used for summary purposes in tables 13 - 18.
b Government forest management activity assignment for summary purposes.
c Industry forest management activity assignment for summary purposes.

APPENDIX 2

FOREST MANAGEMENT EXPENDITURES BY GOVERNMENT [a]

a Certain footnotes refer to Forest Research Centres of the Canadian Forestry Service. These establishments are now called Forestry Centres.

NEWFOUNDLAND

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	61.7	-	555.3	61.7	555.3	617.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	3,867.0	68.2	-	613.8	3,935.2	613.8	4,549.0
Resource access	330.0	270.0	-	2,430.0	600.0	2,430.0	3,030.0
Inventory	-	88.2	-	793.8	88.2	793.8	882.0
Research	-	-	2,076.5[c]	-	-	2,076.5	2,076.5
Timber management	580.0	7.5	-	67.5	587.5	67.5	655.0
Administration	1,636.0	230.0	-	2,070.0	1,866.0	2,070.0	3,936.0
Total[b]	6,413.0	725.6	2,076.5	6,530.4	7,138.6	8,606.9	15,745.5

a Canada-Newfoundland Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by Newfoundland Forest Research Centre, Canadian Forestry Service, St. John's, Newfoundland.

Source: Department of Forest Resources and Lands.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

NEWFOUNDLAND

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	152.0	-	1,368.0	152.0	1,368.0	1,520.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	3,567.0	10.4	-	93.6	3,577.4	93.6	3,671.0
Resource access	350.0	80.0	-	720.0	430.0	720.0	1,150.0
Inventory	740.0	12.8	-	115.2	752.8	115.2	868.0
Research	23.0	3.2	2,712.3[c]	28.8	26.2	2,741.1	2,767.3
Timber management	450.0	11.0	-	99.0	461.0	99.0	560.0
Administration	5,575.0	.6	-	5.4	5,575.6	5.4	5,581.0
Total[b]	10,705.0	270.0	2,712.3	2,430.0	10,975.0	5,142.3	16,117.3

a Canada-Newfoundland Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by Newfoundland Forest Research Centre, Canadian Forestry Service, St. John's, Newfoundland.

Source: Department of Forest Resources and Lands.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

NEWFOUNDLAND

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	230.2	-	2,071.8	230.2	2,071.8	2,302.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	4,550.0	12.8	-	115.2	4,562.8	115.2	4,678.0
Resource access	410.0	220.0	-	1,980.0	630.0	1,980.0	2,610.0
Inventory	570.0	32.5	-	292.5	602.5	292.5	895.0
Research	25.0	59.0	2,774.3[c]	531.0	84.0	3,305.3	3,389.3
Timber management	382.0	37.5	-	337.5	419.5	337.5	757.0
Administration	6,762.0	5.2	-	46.8	6,767.2	46.8	6,814.0
Total[b]	12,699.0	597.2	2,774.3	5,374.8	13,296.2	8,149.1	21,445.3

[a] Canada-Newfoundland Forestry Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Research expenditures by Newfoundland Forest Research Centre, Canadian Forestry Service, St. John's, Newfoundland.

Source: Department of Forest Resources and Lands.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

NEWFOUNDLAND

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	216.1	67.3	-	606.0	283.4	606.0	889.4
Tending	-	355.9	-	3,203.5	355.9	3,203.5	3,559.4
Site preparation	80.5[c]	31.9	-	286.9	112.4	286.9	399.3
Marking	-	-	-	-	-	-	-
Silvicultural support	-	124.0	-	1,116.2	124.0	1,116.2	1,240.2
Total	296.6	579.1	-	5,212.6	875.7	5,212.6	6,088.3
Protection							
Fire	1,157.9	1.0	-	9.0	1,158.9	9.0	1,167.9
Pests	475.0	50.2	-	451.9	525.2	451.9	977.1
Total	1,632.9	51.2	-	460.9	1,684.1	460.9	2,145.0
Resource access	656.5	263.4	-	2,370.9	919.9	2,370.9	3,290.8
Inventory	381.7	65.7	-	591.7	447.4	591.7	1,039.1
Research	22.2	78.0	2,568.0[d]	702.4	100.2	3,270.4	3,370.6
Timber management	2,043.2	33.4	-	300.7	2,076.6	300.7	2,377.3
Administration	6,830.8	41.8	-	375.9	6,872.6	375.9	7,248.5
Total[b]	11,863.9	1,112.6	2,568.0	10,015.1	12,976.5	12,583.1	25,559.6

[a] Canada-Newfoundland Forestry Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] This expenditure covers tending, site preparation and marking.

[d] Research expenditures by the Newfoundland Forest Research Centre, Canadian Forestry Service, St. John's, Newfoundland. Excludes contracts, grants and contributions.

Source: Newfoundland Department of Forest Resources and Lands.
Newfoundland Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

NEWFOUNDLAND

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	82.3	-	740.6	82.3	740.6	822.9
Tending	-	232.4	-	2,091.9	232.4	2,091.9	2,324.3
Site preparation	243.1[c]	174.1	-	1,566.8	417.2	1,566.8	1,984.0
Marking	-	-	-	-	-	-	-
Silvicultural support	-	216.4	-	1,947.5	216.4	1,947.5	2,163.9
Total	243.1	705.2	-	6,346.8	948.3	6,346.8	7,295.1
Protection							
Fire	1,175.4	10.6	-	95.6	1,186.0	95.6	1,281.6
Pests	329.8	31.7	-	285.0	361.5	285.0	646.5
Total	1,505.2	42.3	-	380.6	1,547.5	380.6	1,928.1
Resource access	572.0	400.2	-	3,601.8	972.2	3,601.8	4,574.0
Inventory	544.3	72.4	-	651.8	616.7	651.8	1,268.5
Research	102.0	77.1	3,450.1[d]	694.2	179.1	4,144.3	4,323.4
Timber management	2,189.2	30.7	-	276.3	2,219.9	276.3	2,496.2
Administration	5,669.9	45.9	-	413.0	5,715.8	413.0	6,128.8
Total[b]	10,825.7	1,373.8	3,450.1	12,364.5	12,199.5	15,814.6	28,014.1

[a] Canada-Newfoundland Forestry Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] This expenditure covers tending, site preparation and marking.

[d] Research expenditures by the Newfoundland Forest Research Centre, Canadian Forestry Service, St. John's Newfoundland. Excludes contracts, grants and contributions.

Source: Newfoundland Department of Forest Resources and Lands.
Newfoundland Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

PRINCE EDWARD ISLAND

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	340.0	-	962.0	340.0	962.0	1,302.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	-	50.0	-	-	50.0	-	50.0
Resource access	-	23.0	-	66.0	23.0	66.0	89.0
Inventory	-	-	-	-	-	-	-
Research	-	22.8	-	65.2	22.8	65.2	88.0
Timber management	-	35.3	-	100.7	35.3	100.7	136.0
Administration	-	78.9	-	223.1	78.9	223.1	302.0
Total[b]	-	550.0	-	1,417.0	550.0	1,417.0	1,967.0

a Comprehensive Rural Development Program.

b Totals may not add due to rounding.

Source: Department of Agriculture and Forestry.

PRINCE EDWARD ISLAND

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	535.8	-	1,187.2	535.8	1,187.2	1,723.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	-	51.0	-	70.0	51.0	70.0	121.0
Resource access	-	24.5	-	47.5	24.5	47.5	72.0
Inventory	-	95.8	-	186.2	95.8	186.2	282.0
Research	-	80.9	-	157.1	80.9	157.1	238.0
Timber management	-	50.0	-	97.0	50.0	97.0	147.0
Administration	-	152.0	-	275.0	152.0	275.0	427.0
Total[b]	-	990.0	-	2,020.0	990.0	2,020.0	3,010.0

a Comprehensive Rural Development Program.

b Totals may not add due to rounding.

Source: Department of Agriculture and Forestry.

PRINCE EDWARD ISLAND

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	638.0	-	1,046.0	638.0	1,046.0	1,684.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	-	70.0	-	-	70.0	-	70.0
Resource access	-	28.0	-	57.0	28.0	57.0	85.0
Inventory	-	96.0	-	184.0	96.0	184.0	280.0
Research	-	114.0	-	202.0	114.0	202.0	316.0
Timber management	-	68.0	-	125.0	68.0	125.0	193.0
Administration	-	189.0	-	332.0	189.0	332.0	521.0
Total[b]	-	1,203.0	-	1,946.0	1,203.0	1,946.0	3,149.0

a Comprehensive Rural Development Program.

b Totals may not add due to rounding.

Source: Department of Agriculture and Forestry.

PRINCE EDWARD ISLAND

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	23.0	113.0	-	187.0	136.0	187.0	323.0
Tending	225.0	173.0	-	287.0	398.0	287.0	685.0
Site preparation	-	38.0	-	62.0	38.0	62.0	100.0
Marking	-	10.0	-	15.0	10.0	15.0	25.0
Silvicultural support	-	352.0	-	585.0	352.0	585.0	937.0
Total	248.0	686.0	-	1,136.0	934.0	1,136.0	2,070.0
Protection							
Fire	40.0	-	-	-	40.0	-	40.0
Pests	-	-	-	-	-	-	-
Total	40.0	-	-	-	40.0	-	40.0
Resource access	47.0	43.0	-	71.0	90.0	71.0	161.0
Inventory	-	19.0	-	31.0	19.0	31.0	50.0
Research	-	65.0	-	107.0	65.0	107.0	172.0
Timber management	-	188.0	-	312.0	188.0	312.0	500.0
Administration	50.0	275.0	-	457.0	325.0	457.0	782.0
Total[b]	385.0[c]	1,276.0	-	2,114.0	1,661.0	2,114.0	3,775.0

a Canada-Prince Edward Island Forest Resource Development Agreement.

b Totals may not add due to rounding.

c Includes $210,900 from the Unemployment Insurance Job Creation Program.

Source: Prince Edward Island Department of Energy and Forestry
Maritimes Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

PRINCE EDWARD ISLAND

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	9.0	190.0	-	282.0	199.0	282.0	481.0
Tending	200.0	248.0	-	370.0	448.0	370.0	818.0
Site preparation	-	39.0	-	59.0	39.0	59.0	98.0
Marking	-	12.0	-	18.0	12.0	18.0	30.0
Silvicultural support	29.0	307.0	-	458.0	336.0	458.0	794.0
Total	238.0	796.0	-	1,187.0	1,034.0	1,187.0	2,221.0
Protection							
Fire	37.0	-	-	-	37.0	-	37.0
Pests	-	-	-	-	-	-	-
Total	37.0	-	-	-	37.0	-	37.0
Resource access	-	24.0	-	35.0	24.0	35.0	59.0
Inventory	-	33.0	-	50.0	33.0	50.0	83.0
Research	-	35.0	-	53.0	35.0	53.0	88.0
Timber Management	-	187.0	-	280.0	187.0	280.0	467.0
Administration	50.0	237.0	-	354.0	287.0	354.0	641.0
Total[b]	325.0[c]	1,312.0	-	1,959.0	1,637.0	1,959.0	3,596.0

[a] Canada-Prince Edward Island Forest Resource Development Agreement.

[b] Totals may not add due to rounding.

[c] Includes $182,901 from the Unemployment Insurance Job Creation Program.

Source: Prince Edward Island Department of Energy and Forestry.
Maritimes Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

NOVA SCOTIA

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	98.0	411.0	-	1,643.0	509.0	1,643.0	2,152.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	2,900.0	-	-	-	2,900.0	-	2,900.0
Resource access	634.0	333.0	-	1,333.0	967.0	1,333.0	2,300.0
Inventory	462.0	38.0	-	38.0	500.0	38.0	538.0
Research	221.0	40.0	-	39.0	261.0	39.0	300.0
Timber management	940.0	-	-	-	940.0	-	940.0
Administration	2,200.0	-	-	-	2,200.0	-	2,200.0
Total[b]	7,455.0	822.0	-	3,053.0	8,277.0	3,053.0	11,330.0

a Canada-Nova Scotia Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Lands and Forests.
Department of Regional Economic Expansion.

NOVA SCOTIA

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	244.0	577.0	-	2,307.0	821.0	2,307.0	3,128.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	4,000.0	-	-	-	4,000.0	-	4,000.0
Resource access	706.0	429.0	-	1,665.0	1,135.0	1,665.0	2,800.0
Inventory	602.0	35.0	-	35.0	637.0	35.0	672.0
Research	296.0	2.0	-	2.0	298.0	2.0	300.0
Timber management	1,847.0	-	-	-	1,847.0	-	1,847.0
Administration	2,800.0	-	-	-	2,800.0	-	2,800.0
Total[b]	10,495.0	1,043.0	-	4,009.0	11,538.0	4,009.0	15,547.0

a Canada-Nova Scotia Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Lands and Forests.
Department of Regional Economic Expansion.

NOVA SCOTIA

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	172.0	909.0	-	3,634.0	1,081.0	3,634.0	4,715.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	3,400.0	-	-	-	3,400.0	-	3,400.0
Resource access	970.0	316.0	-	1,286.0	1,286.0	1,260.0	2,546.0
Inventory	370.0	50.0	-	50.0	420.0	50.0	470.0
Research	240.0	30.0	-	30.0	270.0	30.0	300.0
Timber management	1,940.0	-	-	-	1,940.0	-	1,940.0
Administration	2,200.0	-	-	-	2,200.0	-	2,200.0
Total[b]	9,292.0	1,305.0	-	5,000.0	10,597.0	4,974.0	15,571.0

a Canada-Nova Scotia Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Lands and Forests.
Department of Regional Economic Expansion.

NOVA SCOTIA

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	50.3	190.2	-	250.7	240.5	250.7	491.2
Tending	24.0	427.7	-	713.6	451.7	713.6	1,165.3
Site preparation	-	67.0	-	124.2	67.0	124.2	191.2
Marking	-	-	-	-	-	-	-
Silvicultural support	1,725.4	123.9	-	234.8	1,849.3	234.8	2,084.1
Total	1,799.7	808.8	-	1,323.3	2,608.5	1,323.3	3,931.8
Protection							
Fire	2,435.2	-	-	4.1	2,435.2	4.1	2,439.3
Pests	692.9	-	-	-	692.9	-	692.9
Total	3,128.1	-	-	4.1	3,128.1	4.1	3,132.2
Resource access	875.0	187.6	-	243.3	1,062.6	243.3	1,305.9
Inventory	733.5	-	-	-	733.5	-	733.5
Research	407.3	-	-	-	407.3	-	407.3
Timber management	387.3	-	-	121.0	387.3	121.0	508.3
Administration[c]	3,269.7	367.8	-	332.3	3,637.5	332.3	3,969.8
Total[b]	10,600.6	1,364.2	-	2,024.0	11,964.8	2,024.0	13,988.8

a Canada-Nova Scotia Forest Resource Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Includes other expenditures such as silviculture training, private land administration, and boundry line surveying.

Source: Nova Scotia Department of Lands and Forests.
Maritimes Forest Research Centre, Canadian Forestry, Ministry of State (Forestry).

NOVA SCOTIA

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
				$000			
Silviculture							
Regeneration	85.6	256.3	-	551.9	341.9	551.9	893.8
Tending	28.6	662.8	-	1,452.7	691.4	1,452.7	2,144.1
Site preparation	-	320.4	-	340.9	320.4	340.9	661.3
Marking	-	-	-	-	-	-	-
Silvicultural support	2,021.7	478.5	-	302.3	2,500.2	302.3	2,802.5
Total	2,135.9	1,718.0	-	2,647.8	3,853.9	2,647.8	6,501.7
Protection							
Fire	2,616.2	-	-	22.4	2,616.2	22.4	2,638.6
Pests	572.9	-	-	-	572.9	-	572.9
Total	3,189.1	-	-	22.4	3,189.1	22.4	3,211.5
Resource access	875.0	729.0	-	770.5	1,604.0	770.5	2,374.5
Inventory	856.9	-	-	-	856.9	-	856.9
Research	534.0	-	-	-	534.0	-	534.0
Timber management	436.5	-	-	368.4	436.5	368.4	804.9
Administration[c]	3,277.8	512.1	-	514.4	3,789.9	514.4	4,304.3
Total[b]	11,305.2	2,959.1	-	4,323.5	14,264.3	4,323.5	18,587.8

[a] Canada-Nova Scotia Forest Resource Development Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Includes other expenditures such as silviculture training, private land administration, and boundry line surveying.

Source: Nova Scotia Department of Lands and Forests.
Maritimes Forest Research Centre, Canadian Forestry, Ministry of State (Forestry).

NEW BRUNSWICK

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement [a]	Actual	Agreement [a]	Provincial	Federal	Total [b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	550.0	1,142.1	-	4,568.6	1,692.1	4,568.6	6,260.7
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	6,640.0	-	-	-	6,640.0	-	6,640.0
Resource access	235.0	354.3	-	1,417.1	589.3	1,417.1	2,006.4
Inventory	200.0	44.1	-	176.5	244.1	176.5	420.6
Research	450.0	96.3	4,336.9 [c]	385.2	546.3	4,722.1	5,268.4
Timber management	1,300.0	106.0	-	424.0	1,406.0	424.0	1,830.0
Administration	6,900.0	274.9	-	1,099.8	7,174.9	1,099.8	8,274.7
Total [b]	16,275.0	2,017.7	4,336.9	8,071.2	18,292.7	12,408.1	30,700.8

a Canada-New Brunswick Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by the Maritimes Forest Research Centre, Canadian Forestry Service, Fredericton, New Brunswick. The Centre services the provinces of New Brunswick, Nova Scotia and Prince Edward Island.

Source: Department of Natural Resources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

NEW BRUNSWICK

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement [a]	Actual	Agreement [a]	Provincial	Federal	Total [b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	592.1	1,632.4	-	6,529.6	2,224.5	6,529.6	8,754.1
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	7,592.9	-	-	-	7,592.9	-	7,592.9
Resource access	425.9	158.4	-	633.7	584.3	633.7	1,218.0
Inventory	227.6	49.7	-	199.0	277.3	199.0	476.3
Research	501.8	30.9	5,035.4 [c]	123.6	532.7	5,159.0	5,691.7
Timber management	1,404.9	-	-	-	1,404.9	-	1,404.9
Administration	8,611.9	193.7	-	774.6	8,805.6	774.6	9,580.2
Total [b]	19,357.1	2,065.1	5,035.4	8,260.5	21,422.2	13,295.9	34,718.1

a Canada-New Brunswick Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by the Maritimes Forest Research Centre, Canadian Forestry Service, Fredericton, New Brunswick. The Centre services the provinces of New Brunswick, Nova Scotia and Prince Edward Island.

Source: Department of Natural Resources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

NEW BRUNSWICK

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	1,178.4	1,931.6	-	7,726.5	3,110.0	7,726.5	10,836.5
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	11,285.7	-	-	-	11,285.7	-	11,285.7
Resource access	416.9	62.2	-	248.9	479.1	248.9	728.0
Inventory	703.1	34.4	-	137.5	737.5	137.5	875.0
Research	576.2	25.3	5,784.5[c]	101.0	601.5	5,885.5	6,487.0
Timber management	1,505.5	-	-	-	1,505.5	-	1,505.5
Administration	8,912.1	117.9	-	471.4	9,030.0	471.4	9,501.4
Total[b]	24,577.9	2,171.4	5,784.5	8,685.3	26,749.3	14,469.8	41,219.1

a Canada-New Brunswick Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by the Maritimes Forest Research Centre, Canadian Forestry Service, Fredericton, New Brunswick. The Centre services the provinces of New Brunswick, Nova Scotia and Prince Edward Island.

Source: Department of Natural Resources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

NEW BRUNSWICK

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	158.2	783.9	-	3,135.7	942.1	3,135.7	4,077.8
Tending	-	514.2	-	2,056.7	514.2	2,056.7	2,570.9
Site preparation	95.2	-	-	-	95.2	-	95.2
Marking	-	-	-	-	-	-	-
Silvicultural support	989.3	361.7	-	1,446.7	1,351.0	1,446.7	2,797.7
Total	1,242.7	1,659.8	-	6,639.1	2,902.5	6,639.1	9,541.6
Protection							
Fire	4,567.2	-	-	-	4,567.2	-	4,567.2
Pests	11,504.4	-	-	-	11,504.4	-	11,504.4
Total	16,071.6	-	-	-	16,071.6	-	16,071.6
Resource access	56.6	-	-	-	56.6	-	56.6
Inventory	1,025.5	-	-	-	1,025.5	-	1,025.5
Research	337.5	-	6,614.2[c]	-	337.5	6,614.2	6,951.7
Timber management	1,850.8	-	-	-	1,850.8	-	1,850.8
Administration	9,781.1	-	-	969.2	9,781.1	969.2	10,750.3
Total[b]	30,365.8	1,659.8	6,614.2	7,608.3	32,025.6	14,222.5	46,248.1

a Canada-New Brunswick Forestry Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by the Maritimes Forest Research Centre, Canadian Forestry Service, Fredericton, New Brunswick. Excludes contracts, grants and contributions. The Centre services the provinces of New Brunswick, Nova Scotia and Prince Edward Island.

Source: New Brunswick Department of Natural Resources
Maritimes Forest Research Centre, Canadian Forestry, Ministry of State (Forestry).

NEW BRUNSWICK

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	52.6	644.4	-	2,577.8	697.0	2,577.8	3,274.8
Tending	87.8	664.2	-	2,656.9	752.0	2,656.9	3,408.9
Site preparation	0.1	-	-	-	0.1	-	0.1
Marking	-	-	-	-	-	-	-
Silvicultural support	1,281.6	752.3	-	3,009.1	2,033.9	3,009.1	5,043.0
Total	1,422.1	2,060.9	-	8,243.8	3,483.0	8,243.8	11,726.8
Protection							
Fire	5,129.5	-	-	-	5,129.5	-	5,129.5
Pests	9,380.1	32.1	-	128.2	9,412.2	128.2	9,540.4
Total	14,509.6	32.1	-	128.2	14,541.7	128.2	14,669.9
Resource access	79.6	-	-	-	79.6	-	79.6
Inventory	1,357.9	-	-	-	1,357.9	-	1,357.9
Research	419.3	-	8,306.7[c]	-	419.3	8,306.7	8,726.0
Timber management	2,372.5	-	-	-	2,372.5	-	2,372.5
Administration	9,444.1	232.2	-	928.6	9,676.3	928.6	10,604.9
Total[b]	29,605.1	2,325.2	8,306.7	2,300.6	31,930.3	17,607.3	49,537.6

[a] Canada-New Brunswick Forestry Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Research expenditures by the Maritimes Forest Research Centre, Canadian Forestry Service, Fredericton, New Brunswick. Excludes contracts, grants and contributions. The Centre services the provinces of New Brunswick, Nova Scotia and Prince Edward Island.

Source: New Brunswick Department of Natural Resources
Maritimes Forest Research Centre, Canadian Forestry, Ministry of State (Forestry).

QUEBEC

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	8,713.0	7,726.0	-	11,583.0	16,439.0	11,583.0	28,022.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	15,511.0	-	-	-	15,511.0	-	15,511.0
Resource access	4,789.0	7,929.2	-	11,893.8	12,718.2	11,893.8	24,612.0
Inventory	3,393.0	-	-	-	3,393.0	-	3,393.0
Research	2,360.0	-	3,950.6[c]	-	2,360.0	3,950.6	6,310.6
Timber management	15,704.0	-	-	-	15,704.0	-	15,704.0
Administration	29,018.0	-	8,140.2[d]	-	29,018.0	8,140.2	37,158.2
Total[b]	79,488.0	15,655.2	12,090.8	23,476.8	95,143.2	35,567.6	130,710.8

a Canada-Quebec Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by Laurentian Forest Research Centre, Canadian Forestry Service, Ste. Foy, Quebec.

d Administrative expenditures by Canadian Forestry Service headquarters, excluding grants and contributions.

Source: Ministere de l'Energie et des Ressources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

QUEBEC

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	15,866.0	6,911.6	-	10,367.4	22,777.6	10,367.4	33,145.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	17,143.0	-	-	-	17,143.0	-	17,143.0
Resource access	4,954.0	6,502.8	-	9,754.2	11,456.8	9,754.2	21,211.0
Inventory	3,342.0	-	-	-	3,342.0	-	3,342.0
Research	2,600.0	-	4,450.0[c]	-	2,600.0	4,450.0	7,050.0
Timber management	16,048.0	-	-	-	16,048.0	-	16,048.0
Administration	18,479.0	-	9,752.7[d]	-	18,479.0	9,752.7	28,231.7
Total[b]	78,432.0	13,414.4	14,202.7	20,121.6	91,846.4	34,324.3	126,170.7

a Canada-Quebec Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by Laurentian Forest Research Centre, Canadian Forestry Service, Ste. Foy, Quebec.

d Administrative expenditures by Canadian Forestry Service headquarters, excluding grants and contributions.

Source: Ministere de l'Energie et des Ressources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

QUEBEC

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	21,095.0	7,591.2	-	11,386.8	28,686.2	11,386.8	40,073.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	20,513.0	-	-	-	20,513.0	-	20,513.0
Resource access	3,830.0	8,739.2	-	13,108.8	12,569.2	13,108.8	25,678.0
Inventory	3,911.0	-	-	-	3,911.0	-	3,911.0
Research	2,813.0	-	4,969.4[c]	-	2,813.0	4,969.4	7,782.4
Timber management	17,386.0	-	-	-	17,386.0	-	17,386.0
Administration	20,583.0	-	17,294.6[d]	-	20,583.0	17,294.6	37,877.6
Total[b]	90,131.0	16,330.4	22,264.0	24,495.6	106,461.4	46,759.6	153,221.0

a Canada-Quebec Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by Laurentian Forest Research Centre, Canadian Forestry Service, Ste. Foy, Quebec.

d Administrative expenditures by Canadian Forestry Service headquarters, excluding grants and contributions.

Source: Ministere de l'Energie et des Ressources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

QUEBEC

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	5,458.7	16,690.0	-	25,035.6	22,148.7	25,035.6	47,184.3
Protection							
Fire							
Pests							
Total	27,689.3	-	-	-	27,689.3	-	27,689.3
Resource access	8,620.7	5,308.2	-	7,962.3	13,928.9	7,962.3	21,891.2
Inventory	4,513.3	-	-	-	4,513.3	-	4,513.3
Research	2,963.6	-	5,982.7[c]	-	2,963.6	5,982.7	8,946.3
Timber management	22,125.9	-	-	-	22,125.9	-	22,125.9
Administration	24,753.7	-	8,860.8[d]	-	24,753.7	8,860.8	33,614.5
Total[b]	96,125.2	21,998.2	14,843.5	32,997.9	118,123.4	47,841.4	165,964.8

a Canada-Quebec Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by Laurentian Forest Research Centre, Canadian Forestry Service, Ste. Foy, Quebec. Excludes contracts, grants and contributions.

d Administration expenditures by Canadian Forestry Service Headquarters in Hull, Quebec, which services all provinces. Excludes contracts, grants and contributions.

Source: Quebec Ministere de l'Energie et des Ressources.
Laurentian Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).
Canadian Forestry Service Headquarters, Hull, Quebec.

QUEBEC

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	13,119.5	21,784.9	-	32,677.3	34,904.4	32,677.3	67,581.7
Protection							
Fire							
Pests							
Total	38,154.2	-	-	-	38,154.2	-	38,154.2
Resource access	3,230.8	6,703.1	-	10,054.7	9,933.9	10,054.7	19,988.6
Inventory	4,345.9	-	-	-	4,345.9	-	4,345.9
Research	3,031.6	-	7,392.2[c]	-	3,031.6	7,392.2	10,423.8
Timber management	18,314.7	-	-	-	18,314.7	-	18,314.7
Administration	22,628.9	-	14,069.1[d]	-	22,628.9	14,069.1	36,698.0
Total[b]	102,825.6	28,488.0	21,461.3	42,732.0	131,313.6	64,193.3	195,506.9

[a] Canada-Quebec Forest Development Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Research expenditures by Laurentian Forest Research Centre, Canadian Forestry Service, Ste. Foy, Quebec. Excludes contracts, grants and contributions.

[d] Administration expenditures by Canadian Forestry Service Headquarters in Hull, Quebec, which services all provinces. Excludes contracts, grants and contributions.

Source: Quebec Ministere de l'Energie et des Ressources.
Laurentian Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).
Canadian Forestry Service Headquarters, Hull, Quebec.

ONTARIO

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
			$000				
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	40,951.4	448.6	-	448.6	41,400.0	448.6	41,848.6
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	30,000.0	-	-	-	30,000.0	-	30,000.0
Resource access	11,200.0	-	-	-	11,200.0	-	11,200.0
Inventory	1,300.0	-	-	-	1,300.0	-	1,300.0
Research	2,360.9	39.1	10,858.1[c]	39.1	2,400.0	10,897.2	13,297.2
Timber management	12,273.1	126.9	-	126.9	12,400.0	126.9	12,526.9
Administration	7,500.0	-	-	-	7,500.0	-	7,500.0
Total[b]	105,585.4	614.6	10,858.1	614.6	106,200.0	11,472.7	117,672.7

a Canada-Ontario Community and Rural Resource Development Subsidiary Agreement.
Canada-Ontario Forest Management Subsidiary Agreement.
Canada-Ontario Eastern Ontario Subsidiary Agreement.
Canada-Ontario Northern Rural Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by the Great Lakes Forest Research Centre, Sault Ste. Marie, Ontario, Forest Pest Management Institute, Sault Ste. Marie, Ontario and the Petawawa National Forestry Institute, Chalk River, Ontario.

Source: Ontario Ministry of Natural Resources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

ONTARIO

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
			$000				
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	51,671.2	3,028.8	-	3,028.8	54,700.0	3,028.8	57,728.8
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	62,800.0	-	-	-	62,800.0	-	62,800.0
Resource access	13,611.5	2,988.5	-	2,988.5	16,600.0	2,988.5	19,588.5
Inventory	2,415.6	384.4	-	384.4	2,800.0	384.4	3,184.4
Research	2,500.7	699.3	12,724.0[c]	699.3	3,200.0	13,423.3	16,623.3
Timber management	14,469.1	130.9	-	130.9	14,600.0	130.9	14,730.9
Administration	7,577.1	222.9	-	222.9	7,800.0	222.9	8,022.9
Total[b]	155,045.2	7,454.8	12,724.0	7,454.8	162,500.0	20,178.8	182,678.8

a Canada-Ontario Community and Rural Resource Development Subsidiary Agreement.
Canada-Ontario Forest Management Subsidiary Agreement.
Canada-Ontario Eastern Ontario Subsidiary Agreement.
Canada-Ontario Northern Rural Development Subsidiary Agreement.

b Totals may not add due to rounding.

c Research expenditures by the Great Lakes Forest Research Centre, Sault Ste. Marie, Ontario, Forest Pest Management Institute, Sault Ste. Marie, Ontario and the Petawawa National Forestry Institute, Chalk River, Ontario.

Source: Ontario Ministry of Natural Resources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

ONTARIO

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	71,589.9	3,810.1	-	3,810.1	75,400.0	3,810.1	79,210.1
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	47,900.0	-	-	-	47,900.0	-	47,900.0
Resource access	14,583.1	5,316.9	-	5,316.9	19,900.0	5,316.9	25,216.9
Inventory	2,333.2	666.8	-	666.8	3,000.0	666.8	3,666.8
Research	2,830.5	569.5	13,503.5[c]	569.5	3,400.0	14,073.0	17,473.0
Timber management	16,040.6	59.4	-	59.4	16,100.0	59.4	16,159.4
Administration	10,270.1	329.9	-	329.9	10,600.0	329.9	10,929.9
Total[b]	165,547.2	10,752.6	13,503.5	10,752.6	176,300.0	24,256.1	200,556.1

[a] Canada-Ontario Community and Rural Resource Development Subsidiary Agreement.
Canada-Ontario Forest Management Subsidiary Agreement.
Canada-Ontario Eastern Ontario Subsidiary Agreement.
Canada-Ontario Northern Rural Development Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Research expenditures by the Great Lakes Forest Research Centre, Sault Ste. Marie, Ontario, Forest Pest Management Institute, Sault Ste. Marie, Ontario and the Petawawa National Forestry Institute, Chalk River, Ontario.

Source: Ontario Ministry of Natural Resources.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

ONTARIO

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	85,106.2	2,096.9	-	2,193.9[c]	87,203.1	2,193.9	89,397.0
Protection							
Fire	41,700.0	-	-	-	41,700.0	-	41,700.0
Pests	1,200.0	-	-	-	1,200.0	-	1,200.0
Total	42,900.0	-	-	-	42,900.0	-	42,900.0
Resource access	26,770.2[d]	7,064.9	-	7,064.9	33,835.1	7,064.9	40,900.0
Inventory	2,493.0	3.5	-	3.5	2,496.5	3.5	2,500.0
Research	2,258.2	520.9	17,378.4[e]	520.9	2,779.1	17,899.3	20,678.4
Timber management	15,000.0	-	-	-	15,000.0	-	15,000.0
Administration	19,200.0	-	-	-	19,200.0	-	19,200.0
Total[b]	193,727.6	9,686.2	17,378.4	9,783.2	203,413.8	27,161.8	230,575.4

[a] Canada-Ontario Community and Rural Resource Subsidiary Development Agreement.
Canada-Ontario Forest Management Subsidiary Agreement.
Canada-Ontario Eastern Ontario Subsidiary Agreement.
Canada-Ontario Northern Rural Development Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Includes $97,000 for native funding (funded unilaterally) under the Northern Rural Development Subsidiary Agreement by Department of Indian and Northern Affairs and the Department of Regional Industrial Expansion.

[d] $10.8 million was spent under Forest Management Agreements on roads.

[e] Research expenditures by the Great Lakes Forest Research Centre, Sault Ste. Marie, Ontario, Forest Pest Management Institute, Sault Ste. Marie, Ontario, and the Petawawa National Forestry Institute, Chalk River, Ontario. Excludes contracts, grants and contributions.

Source: Ontario Ministry of Natural Resources.
Petawawa National Forestry Institute, Canadian Forestry Service, Ministry of State [Forestry].
Forest Pest Management Institute, Canadian Forestry Service, Ministry of State [Forestry].
Great Lakes Forest Research Centre, Canadian Forestry Service, Ministry of State [Forestry].
Department of Regional Industrial Expansion.

ONTARIO

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	86,270.8	2,264.6	-	2,320.6[c]	88,535.4	2,320.6	90,856.0
Protection							
Fire	56,800.0	-	-	-	56,800.0	-	56,800.0
Pests	1,100.0	-	-	-	1,100.0	-	1,100.0
Total	57,900.0	-	-	-	57,900.0	-	57,900.0
Resource access	44,582.8[d]	6,208.6	-	6,208.6	50,791.4	6,208.6	57,000.0
Inventory	2,000.0	-	-	-	2,000.0	-	2,000.0
Research	2,756.2	371.9	22,080.6[e]	371.9	3,128.1	22,452.5	25,580.6
Timber management	14,000.0	-	-	-	14,000.0	-	14,000.0
Administration	20,800.0	-	-	-	20,800.0	-	20,800.0
Total[b]	228,309.8	8,845.1	22,080.6	8,901.1	237,154.9	30,981.7	268,136.6

[a] Canada-Ontario Community and Rural Resource Subsidiary Development Agreement.
Canada-Ontario Forest Management Subsidiary Agreement.
Canada-Ontario Eastern Ontario Subsidiary Agreement.
Canada-Ontario Northern Rural Development Subsidiary Agreement.

[b] Totals may not add due to rounding.

[c] Includes $56,000 for native funding (funded unilaterally) under the Northern Rural Development Subsidiary Agreement by Department of Indian and Northern Affairs and the Department of Regional Industrial Expansion.

[d] $23.5 million was spent under Forest Management Agreements on roads.

[e] Research expenditures by the Great Lakes Forest Research Centre, Sault Ste. Marie, Ontario, Forest Pest Management Institute, Sault Ste. Marie, Ontario, and the Petawawa National Forestry Institute, Chalk River, Ontario. Excludes contracts, grants and contributions.

Source: Ontario Ministry of Natural Resources.
Petawawa National Forestry Institute, Canadian Forestry Service, Ministry of State [Forestry].
Forest Pest Management Institute, Canadian Forestry Service, Ministry of State [Forestry].
Great Lakes Forest Research Centre, Canadian Forestry Service, Ministry of State [Forestry].
Department of Regional Industrial Expansion.

MANITOBA

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	961.4	456.2	-	684.3	1,417.6	684.3	2,101.9
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	5,390.8	233.1	-	349.6	5,623.9	349.6	5,973.5
Resource access	437.0	189.7	-	284.5	626.7	284.5	911.2
Inventory	513.2	-	-	-	513.2	-	513.2
Research	-	-	-	-	-	-	-
Timber management	634.0	2.7	-	4.1	636.7	4.1	640.8
Administration	674.6	-	-	-	674.6	-	674.6
Total[b]	8,611.0	881.7	-	1,322.6	9,492.7	1,322.5	10,815.3

a Canada-Manitoba Northlands Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Natural Resources, Forestry Branch.
Department of Regional Economic Expansion.

MANITOBA

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	1,203.8	545.4	-	818.1	1,749.2	818.1	2,567.3
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	13,736.6	270.3	-	405.5	14,006.9	405.5	14,412.4
Resource access	639.6	198.9	-	298.4	838.5	298.4	1,136.9
Inventory	774.0	81.3	-	121.9	855.3	121.9	977.2
Research	-	-	-	-	-	-	-
Timber management	765.4	53.4	-	80.2	818.8	80.2	899.0
Administration	706.7	-	-	-	706.7	-	706.7
Total[b]	17,826.1	1,149.3	-	1,724.1	18,975.4	1,724.1	20,699.5

a Canada-Manitoba Northlands Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Natural Resources, Forestry Branch.
Department of Regional Economic Expansion.

MANITOBA

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	1,305.2	-	-	-	1,305.2	-	1,305.2
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	11,995.7	-	-	-	11,995.7	-	11,995.7
Resource access	600.0	-	-	-	600.0	-	600.0
Inventory	652.8	-	-	-	652.8	-	652.8
Research	-	-	-	-	-	-	-
Timber management	861.9	-	-	-	861.9	-	861.9
Administration	738.0	-	-	-	738.0	-	738.0
Total[b]	15,753.6	-	-	-	15,753.6	-	15,753.6

a Canada-Manitoba Northlands Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Natural Resources, Forestry Branch.
Department of Regional Economic Expansion.

MANITOBA

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration	436.0	-	-	-	436.0	-	436.0
Tending	-	-	-	-	-	-	-
Site preparation	210.1	-	-	-	210.1	-	210.1
Marking	51.8	-	-	-	51.8	-	51.8
Silvicultural support	933.7	-	-	-	933.7	-	933.7
Total	1,631.6	-	-	-	1,631.6	-	1,631.6
Protection							
Fire	-	-	-	-	-	-	-
Pests	2,126.2	-	-	-	2,126.2	-	2,126.2
Total	2,126.2	-	-	-	2,126.2	-	2,126.2
Resource access	499.2	-	-	-	499.2	-	499.2
Inventory	603.9	-	-	-	603.9	-	603.9
Research	27.5	-	-	-	27.5	-	27.5
Timber management	758.8	-	-	-	758.8	-	758.8
Administration	148.9	-	-	-	148.9	-	148.9
Total[a]	5,796.1	-	-	-	5,796.1	-	5,796.1

a Totals may not add due to rounding.

Source: Manitoba Department of Natural Resources, Forestry Branch
Northern Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

MANITOBA

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration	920.3	-	-	-	920.3	-	920.3
Tending	-	-	-	-	-	-	-
Site preparation	190.1	-	-	-	190.1	-	190.1
Marking	78.2	-	-	-	78.2	-	78.2
Silvicultural support	1,069.6	-	-	-	1,069.6	-	1,069.2
Total	1,858.2	-	-	-	1,858.2	-	1,858.2
Protection							
Fire	-	-	-	-	-	-	-
Pests	1,920.1	-	-	-	1,920.1	-	1,920.1
Total	1,920.1	-	-	-	1,920.1	-	1,920.1
Resource access	-	-	-	-	-	-	-
Inventory	775.4	-	-	-	775.4	-	775.4
Research	49.8	-	-	-	49.8	-	49.8
Timber management	999.3	-	-	-	999.3	-	999.3
Administration	177.8	-	-	-	177.8	-	177.8
Total[a]	5,780.6	-	-	-	5,780.6	-	5,780.6

[a] Totals may not add due to rounding.

Source: Manitoba Department of Natural Resources, Forestry Branch
Northern Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

SASKATCHEWAN

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	2,189.7	793.7	-	793.7	2,983.4	793.7	3,777.1
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	5,421.8	-	-	-	5,421.8	-	5,421.8
Resource access	352.6	1,829.2	-	1,829.2	2,181.8	1,829.2	4,011.0
Inventory	890.9	359.3	-	359.3	1,250.2	359.3	1,609.5
Research	-	-	-	-	-	-	-
Timber management	347.8	262.1	-	262.1	609.9	262.1	872.0
Administration	719.2	21.9	-	21.9	741.1	21.9	763.0
Total[b]	9,922.0	3,266.2	-	3,266.2	13,188.2	3,266.2	16,454.4

a Canada-Saskatchewan Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Parks and Renewable Resources.
Department of Regional Economic Expansion.

SASKATCHEWAN

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	2,756.2	1,036.0	-	1,036.0	3,792.2	1,036.0	4,828.2
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	19,110.6	-	-	-	19,110.6	-	19,110.6
Resource access	359.4	985.4	-	985.4	1,344.8	985.4	2,330.2
Inventory	867.8	589.9	-	589.9	1,457.7	589.9	2,047.6
Research	-	-	-	-	-	-	-
Timber management	401.4	269.0	-	269.0	670.4	269.0	939.4
Administration	1,031.6	70.3	-	70.3	1,101.9	70.3	1,172.2
Total[b]	24,527.0	2,950.6	-	2,950.6	27,477.6	2,950.6	30,428.2

a Canada-Saskatchewan Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Parks and Renewable Resources.
Department of Regional Economic Expansion.

SASKATCHEWAN

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement[a]	Actual	Agreement[a]	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	2,199.2	531.2	-	531.2	2,730.4	531.2	3,261.6
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	26,361.9	-	-	-	26,361.9	-	26,361.9
Resource access	460.2	1,079.6	-	1,079.6	1,539.8	1,079.6	2,619.4
Inventory	980.1	507.6	-	507.6	1,487.7	507.6	1,995.3
Research	-	-	-	-	-	-	-
Timber management	480.7	221.5	-	221.5	702.2	221.5	923.7
Administration	1,044.4	114.1	-	114.1	1,158.5	114.1	1,272.6
Total[b]	31,526.5	2,454.0	-	2,454.0	33,980.5	2,454.0	36,434.5

a Canada-Saskatchewan Forest Development Subsidiary Agreement.

b Totals may not add due to rounding.

Source: Department of Parks and Renewable Resources.
Department of Regional Economic Expansion.

SASKATCHEWAN

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration	1,091.1	-	-	-	1,091.1	-	1,091.1
Tending	25.0	-	-	-	25.0	-	25.0
Site preparation	349.4	-	-	-	349.4	-	349.4
Marking	-	-	-	-	-	-	-
Silvicultural support	1,734.0	-	-	-	1,734.0	-	1,734.0
Total	3,199.5	-	-	-	3,199.5	-	3,199.5
Protection							
Fire	8,778.1	-	-	-	8,778.1	-	8,778.1
Pests	40.6	-	-	-	40.6	-	40.6
Total	8,818.7	-	-	-	8,818.7	-	8,818.7
Resource access	35.0	-	-	-	35.0	-	35.0
Inventory	1,259.5	-	-	-	1,259.5	-	1,259.5
Research	53.0	-	-	-	53.0	-	53.0
Timber management	609.4	-	-	-	609.4	-	609.4
Administration	523.6	-	-	-	523.6	-	523.6
Total[a]	14,498.7	-	—	-	14,498.7	-	14,498.7

a Totals may not add due to rounding.

Source: Saskatchewan Department of Parks and Natural Resources.
Northern Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

SASKATCHEWAN

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration	923.6	-	-	-	923.6	-	923.6
Tending	74.7	-	-	-	74.7	-	74.7
Site preparation	408.7	-	-	-	408.7	-	408.7
Marking	-	-	-	-	-	-	-
Silvicultural support	1,650.9	-	-	-	1,650.9	-	1,650.9
Total	3,057.9	-	-	-	3,057.9	-	3,057.9
Protection							
Fire	7,588.6	-	-	-	7,588.6	-	7,588.6
Pests	212.4	-	-	-	212.4	-	212.4
Total	7,801.0	-	-	-	7,801.0	-	7,801.0
Resource access	25.0	-	-	-	25.0	-	25.0
Inventory	1,344.8	-	-	-	1,344.8	-	1,344.8
Research	131.3	-	-	-	131.3	-	131.3
Timber management	1,270.6	-	-	-	1,270.6	-	1,270.6
Administration	711.3	-	-	-	711.3	-	711.3
Total[a]	14,341.9	-	-	-	14,341.9	-	14,341.9

[a] Totals may not add due to rounding.

Source: Saskatchewan Department of Parks and Natural Resources.
Northern Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

ALBERTA

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total [a]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	6,760.5	-	-	-	6,760.5	-	6,760.5
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	18,410.1	-	-	-	18,410.1	-	18,410.1
Resource access	930.1	-	-	-	930.1	-	930.1
Inventory	979.0	-	-	-	979.0	-	979.0
Research	60.1	-	3,594.5 [b]	-	60.1	3,594.5	3,654.6
Timber management	388.8	-	-	-	388.8	-	388.8
Administration	17,897.0	-	-	-	17,897.0	-	17,897.0
Total [a]	45,425.5	-	3,594.5	-	45,425.5	3,594.5	49,020.0

a Totals may not add due to rounding.

b Research expenditures by the Northern Forest Research Centre, Canadian Forestry Service, Edmonton, Alberta. The Centre services Alberta, Saskatchewan, and the Northwest Territories.

Source: Department of Energy and Natural Resources.
Canadian Forestry Service, Ministry of State (Forestry).

ALBERTA

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total [a]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	8,229.7	-	-	-	8,229.7	-	8,229.7
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	45,170.0	-	-	-	45,170.0	-	45,170.0
Resource access	2,698.5	-	-	-	2,698.5	-	2,698.5
Inventory	496.8	-	-	-	496.8	-	496.8
Research	837.4	-	4,311.9 [b]	-	837.4	4,311.9	5,149.3
Timber management	412.6	-	-	-	412.6	-	412.6
Administration	21,169.4	-	-	-	21,169.4	-	21,169.4
Total [a]	79,014.4	-	4,311.9	-	79,014.4	4,311.9	83,326.3

a Totals may not add due to rounding.

b Research expenditures by the Northern Forest Research Centre, Canadian Forestry Service, Edmonton, Alberta. The Centre services Alberta, Saskatchewan, and the Northwest Territories.

Source: Department of Energy and Natural Resources.
Canadian Forestry Service, Ministry of State (Forestry).

ALBERTA

Distribution of expenditures on forest management by source and activity, 1981/82[a]

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[b]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	9,845.0	-	-	-	9,845.0	-	9,845.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	76,124.0	-	-	-	76,124.0	-	76,124.0
Resource access	3,226.0	-	-	-	3,226.0	-	3,226.0
Inventory	812.0	-	-	-	812.0	-	812.0
Research	758.0	-	4,902.6[c]	-	758.0	4,902.6	5,660.0
Timber management	503.0	-	-	-	503.0	-	503.0
Administration	25,000.0	-	-	-	25,000.0	-	25,000.0
Total[b]	116,268.0	-	4,902.6	-	116,268.0	4,902.6	121,170.6

a Estimates.

b Totals may not add due to rounding.

c Research expenditures by the Northern Forest Research Centre, Canadian Forestry Service, Edmonton, Alberta. The Centre services Alberta, Saskatchewan, and the Northwest Territories.

Source: Department of Energy and Natural Resources.
Canadian Forestry Service, Ministry of State (Forestry).

ALBERTA

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration	2,867.7	-	-	-	2,867.7	-	2,867.7
Tending	384.7	-	-	-	384.7	-	384.7
Site preparation	4,679.5	-	-	-	4,679.5	-	4,679.5
Marking	-	-	-	-	-	-	-
Silvicultural support	4,409.1	-	-	-	4,409.1	-	4,409.1
Total	12,341.0	-	-	-	12,341.0	-	12,341.0
Protection							
Fire	75,226.4	-	-	-	75,226.4	-	75,226.4
Pests	619.7	-	-	-	619.7	-	619.7
Total	75,846.1	-	-	-	75,846.1	-	75,846.1
Resource access	-	-	-	-	-	-	-
Inventory	975.3	-	-	-	975.3	-	975.3
Research	1,551.3	-	5,784.9[b]	-	1,551.3	5,784.9	7,336.2
Timber management	657.3	-	-	-	657.3	-	657.3
Administration	31,299.3[c]	-	-	-	31,299.3	-	31,299.3
Total[a]	122,670.3	-	5,784.9	-	122,670.3	5,784.9	128,455.2

a Totals may not add due to rounding.

b Research expenditures by the Northern Forest Research Centre, Canadian Forestry Service, Edmonton, Alberta. Excludes contracts, grants and contributions. The Centre services Alberta, Saskatchewan, Manitoba, and the Northwest Territories.

c Includes "other administrative" expenditures by the department, as did the 1977-81 report. Not all expenditures are specifically on forest management activities.

Source: Alberta Department of Energy and Natural Resources.
Northern Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

ALBERTA

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration	4,371.3	-	-	-	4,371.3	-	4,371.3
Tending	322.4	-	-	-	322.4	-	322.4
Site preparation	4,054.8	-	-	-	4,054.8	-	4,054.8
Marking	-	-	-	-	-	-	-
Silvicultural support	3,934.8	-	-	-	3,934.8	-	3,934.8
Total	12,683.3	-	-	-	12,683.3	-	12,683.3
Protection							
Fire	16,748.2	-	-	-	16,748.2	-	16,748.2
Pests	1,124.4	-	-	-	1,124.4	-	1,124.4
Total	17,872.6	-	-	-	17,872.6	-	17,872.6
Resource access	-	-	-	-	-	-	-
Inventory	510.0	-	-	-	510.0	-	510.0
Research	2,351.0	-	7,313.4[b]	-	2,351.0	7,313.4	9,664.4
Timber management	732.8	-	-	-	732.8	-	732.8
Administration	30,488.7[c]	-	-	-	30,488.7	-	30,488.7
Total[a]	64,638.4	-	7,313.4	-	64,638.4	7,313.4	71,951.8

[a] Totals may not add due to rounding.

[b] Research expenditures by the Northern Forest Research Centre, Canadian Forestry Service, Edmonton, Alberta. Excludes contracts, grants and contributions. The Centre services Alberta, Saskatchewan, Manitoba, and the Northwest Territories.

[c] Includes "other administrative" expenditures by the department, as did the 1977-81 report. Not all expenditures are specifically on forest management activities.

Source: Alberta Department of Energy and Natural Resources.
Northern Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

BRITISH COLUMBIA

Distribution of expenditures on forest management by source and activity, 1979/80[a]

Activity	Province		Federal		Total		
	Actual	Agreement[b]	Actual	Agreement[b]	Provincial	Federal	Total[c]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	38,301.0	5,700.0	-	5,700.0	44,001.0	5,700.0	49,701.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	37,302.0	-	-	-	37,302.0	-	37,302.0
Resource access	42,477.0	-	-	-	42,477.0	-	42,477.0
Inventory	5,414.0	-	-	-	5,414.0	-	5,414.0
Research	4,256.0	-	4,730.2[d]	-	4,256.0	4,730.2	8,986.2
Timber management	10,392.0	-	-	-	10,392.0	-	10,392.0
Administration	42,859.0	-	-	-	42,859.0	-	42,859.0
Total[c]	181,001.0	5,700.0	4,730.2	5,700.0	186,701.0	10,430.2	197,131.2

a Expenditures exclude range and recreation expenditures by the Ministry of Forests.

b Canada-British Columbia Intensive Forest Management Subsidiary Agreement.

c Totals may not add due to rounding.

d Research expenditures by the Pacific Forest Research Centre, Canadian Forestry Service, Victoria, British Columbia. The Centre services the province of British Columbia and the Yukon Territory.

Source: Ministry of Forests.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

BRITISH COLUMBIA

Distribution of expenditures on forest management by source and activity, 1980/81[a]

Activity	Province		Federal		Total		
	Actual	Agreement[b]	Actual	Agreement[b]	Provincial	Federal	Total[c]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	60,011.0	5,812.0	-	5,812.0	65,823.0	5,812.0	71,635.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	30,013.0	-	-	-	30,013.0	-	30,013.0
Resource access	60,118.0	-	-	-	60,118.0	-	60,118.0
Inventory	5,939.0	-	-	-	5,939.0	-	5,939.0
Research	8,108.0	-	5,468.3[d]	-	8,108.0	5,468.3	13,576.3
Timber management	23,459.0	-	-	-	23,459.0	-	23,459.0
Administration	63,154.0	-	-	-	63,154.0	-	63,154.0
Total[c]	250,802.0	5,812.0	5,468.3	5,812.0	256,614.0	11,280.3	267,894.3

a Expenditures exclude range and recreation expenditures by the Ministry of Forests.

b Canada-British Columbia Intensive Forest Management Subsidiary Agreement.

c Totals may not add due to rounding.

d Research expenditures by the Pacific Forest Research Centre, Canadian Forestry Service, Victoria, British Columbia. The Centre services the province of British Columbia and the Yukon Territory.

Source: Ministry of Forests.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

BRITISH COLUMBIA

Distribution of expenditures on forest management by source and activity, 1981/82[a]

Activity	Province		Federal		Total		
	Actual	Agreement[b]	Actual	Agreement[b]	Provincial	Federal	Total[c]
	$000						
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	69,073.0	3,488.0	-	3,488.0	72,561.0	3,488.0	76,049.0
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	60,959.0	-	-	-	60,959.0	-	60,959.0
Resource access	39,258.0	-	-	-	39,258.0	-	39,258.0
Inventory	9,080.0	-	-	-	9,080.0	-	9,080.0
Research	8,433.0	-	6,536.4[d]	-	8,433.0	6,536.4	14,969.4
Timber management	32,100.0	-	-	-	32,100.0	-	32,100.0
Administration	62,480.0	-	-	-	62,480.0	-	62,480.0
Total[c]	281,383.0	3,488.0	6,536.4	3,488.0	284,871.0	10,024.4	294,895.4

a Expenditures exclude range and recreation expenditures by the Ministry of Forests.

b Canada-British Columbia Intensive Forest Management Subsidiary Agreement.

c Totals may not add due to rounding.

d Research expenditures by the Pacific Forest Research Centre, Canadian Forestry Service, Victoria, British Columbia. The Centre services the province of British Columbia and the Yukon Territory.

Source: Ministry of Forests.
Department of Regional Economic Expansion.
Canadian Forestry Service, Ministry of State (Forestry).

BRITISH COLUMBIA

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual[a]	Agreement[b]	Actual	Agreement[b]	Provincial	Federal	Total[c]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	88,972.0	4,822.0	-	4,822.0	93,794.0	4,822.0	98,616.0
Protection							
Fire							
Pests							
Total	61,771.0	121.0	-	121.0	61,892.0	121.0	62,013.0
Resource access	24,381.0	-	-	-	24,381.0	-	24,381.0
Inventory	8,544.0	-	-	-	8,544.0	-	8,544.0
Research	9,227.0	-	6,555.7[d]	-	9,227.0	6,555.7	15,782.7
Timber management	34,893.0	-	-	-	34,893.0	-	34,893.0
Administration	64,068.0	58.0	-	58.0	64,126.0	58.0	64,184.0
Total[c]	291,856.0	5,001.0	6,555.7	5,001.0	296,857.0	11,556.7	308,413.7

a Expenditures exclude range and recreation expenditures by the Ministry of Forests and include expenditures through Section 88 of the Forest Act.

b Canada-British Columbia Intensive Forest Management Subsidiary Agreement.

c Totals may not add due to rounding.

d Research expenditures by the Pacific Forest Research Centre, Canadian Forestry Service, Victoria, British Columbia. Excludes contracts, grants and contributions. The Centre services British Columbia and the Yukon Territory.

Source: British Columbia Ministry of Forests.
Pacific Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

BRITISH COLUMBIA

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual[a]	Agreement[b]	Actual	Agreement[b]	Provincial	Federal	Total[c]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	85,592.0	4,948.0	-	4,948.0	90,540.0	4,948.0	95,488.0
Protection							
Fire							
Pests							
Total	39,150.0	2.0	-	2.0	39,152.0	2.0	39,154.0
Resource access	23,689.0	-	-	-	23,689.0	-	23,689.0
Inventory	9,410.0	-	-	-	9,410.0	-	9,410.0
Research	8,407.0	-	9,272.1[d]	-	8,407.0	9,272.1	17,679.1
Timber management	34,542.0	-	-	-	34,542.0	-	34,542.0
Administration	64,881.0	50.0	-	50.0	64,931.0	50.0	64,981.0
Total[c]	265,671.0	5,000.0	9,272.1	5,000.0	270,671.0	14,272.1	284,943.1

[a] Expenditures exclude range and recreation expenditures by the Ministry of Forests and include expenditures through Section 88 of the Forest Act.

[b] Canada-British Columbia Intensive Forest Management Subsidiary Agreement

[c] Totals may not add due to rounding.

[d] Research expenditures by the Pacific Forest Research Centre, Canadian Forestry Service, Victoria, British Columbia. Excludes contracts, grants and contributions. The Centre services British Columbia and the Yukon Territory.

Source: British Columbia Ministry of Forests.
Pacific Forest Research Centre, Canadian Forestry Service, Ministry of State (Forestry).

YUKON TERRITORY and NORTHWEST TERRITORIES

Distribution of expenditures on forest management by source and activity, 1979/80

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
			$000				
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	-	-	10,202	-	-	10,202	10,202
Resource access	-	-	-	-	-	-	-
Inventory	-	-	-	-	-	-	-
Research	-	-	-	-	-	-	-
Timber management	-	-	1,986	-	-	1,986	1,986
Administration	-	-	-	-	-	-	-
Total[a]	-	-	12,188	-	-	12,188	12,188

a Totals may not add due to rounding.

Source: Department of Indian and Northern Affairs.

YUKON TERRITORY and NORTHWEST TERRITORIES

Distribution of expenditures on forest management by source and activity, 1980/81

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
			$000				
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	-	-	20,567	-	-	20,567	20,567
Resource access	-	-	-	-	-	-	-
Inventory	-	-	-	-	-	-	-
Research	-	-	-	-	-	-	-
Timber management	-	-	2,003	-	-	2,003	2,003
Administration	-	-	-	-	-	-	-
Total[a]	-	-	22,570	-	-	22,570	22,570

a Totals may not add due to rounding.

Source: Department of Indian and Northern Affairs.

YUKON TERRITORY and NORTHWEST TERRITORIES

Distribution of expenditures on forest management by source and activity, 1981/82

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
			$000				
Silviculture							
Regeneration	-	-	-	-	-	-	-
Tending	-	-	-	-	-	-	-
Site preparation	-	-	-	-	-	-	-
Marking	-	-	-	-	-	-	-
Silvicultural support	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-
Protection							
Fire	-	-	-	-	-	-	-
Pests	-	-	-	-	-	-	-
Total	-	-	22,355	-	-	22,355	22,355
Resource access	-	-	-	-	-	-	-
Inventory	-	-	-	-	-	-	-
Research	-	-	-	-	-	-	-
Timber management	-	-	2,360	-	-	2,360	2,360
Administration	-	-	-	-	-	-	-
Total[a]	-	-	24,715	-	-	24,715	24,715

a Totals may not add due to rounding.

Source: Department of Indian and Northern Affairs.

YUKON TERRITORY AND NORTHWEST TERRITORIES

Distribution of expenditures on forest management by source and activity, 1982/83

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
			$000				
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support							
Total	-	-	-	-	-	-	-
Protection							
Fire							
Pests							
Total	-	-	25,926.0	-	-	25,926.0	25,926.0
Resource access	-	-	-	-	-	-	-
Inventory	-	-	-	-	-	-	-
Research	-	-	-	-	-	-	-
Timber management	-	-	1,600.0	-	-	1,600.0	1,600.0
Administration	-	-	-	-	-	-	-
Total[a]	-	-	27,526.0	-	-	27,526.0	27,526.0

a Totals may not add due to rounding.

Source: Department of Indian and Northern Affairs Canada.

YUKON TERRITORY AND NORTHWEST TERRITORIES

Distribution of expenditures on forest management by source and activity, 1983/84

Activity	Province		Federal		Total		
	Actual	Agreement	Actual	Agreement	Provincial	Federal	Total[a]
	$000						
Silviculture							
Regeneration							
Tending							
Site preparation							
Marking							
Silvicultural support	—	—	—	—	—	—	—
Total	-	-	-	-	-	-	-
Protection							
Fire							
Pests	—	—	—	—	—	—	—
Total	-	-	25,236.0	-	-	25,236.0	25,236.0
Resource access	-	-	-	-	-	-	-
Inventory	-	-	-	-	-	-	-
Research	-	-	-	-	-	-	-
Timber management	-	-	1,878.0	-	-	1,878.0	1,878.0
Administration	-	-	-	-	-	-	-
Total[a]	-	-	27,114.0	-	-	27,114.0	27,114.0

[a] Totals may not add due to rounding.

Source: Department of Indian and Northern Affairs Canada.

APPENDIX 3

FOREST MANAGEMENT EXPENDITURES BY INDUSTRY

NEWFOUNDLAND

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	--	--	--
Stand Tending	359	359	--
Silviculture	359	359	--
Forest Protection	262	17	245
Forest Access	1,877	1,261	616
Other Forestry	585	--	585
TOTAL	3,083	1,637	1,446

Source: Reed and Associates Ltd. (1978)

NEWFOUNDLAND

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	62	21	41
Stand Tending	187	139	48
Silviculture	249	160	89
Forest Protection	1,151	19	1,132
Forest Access	1,153	29	1,124
Other Forestry	1,206	4	1,202
TOTAL	3,759	212	3,547

Source: Reed and Associates Ltd. (1980)

NEWFOUNDLAND

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	516	105	411
Stand Tending	1,684	344	1,340
Silviculture	2,200	449	1,751
Forest Protection	2,949	10	2,939
Forest Access	2,197	--	2,197
Other Forestry	996	65	931
TOTAL	8,342	524	7,818

Source: Canadian Pulp and Paper Association

NEWFOUNDLAND

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	986	595	391
Stand Tending	2,335	1,407	928
Silviculture	3,321	2,002	1,319
Forest Protection	1,688	20	1,668
Forest Access	1,716	474	1,242
Other Forestry	781	--	781
TOTAL	7,506	2,496	5,010

Source: Canadian Pulp and Paper Association

NOVA SCOTIA

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	745	80	665
Stand Tending	725	145	580
Silviculture	1,470	225	1,245
Forest Protection	50	5	45
Forest Access	3,885	412	3,473
Other Forestry	511	2	509
TOTAL	5,916	644	5,272

Source: Reed and Associates Ltd. (1978)

NOVA SCOTIA

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	1,460	406	1,054
Stand Tending	1,135	303	832
Silviculture	2,595	709	1,886
Forest Protection	90	--	90
Forest Access	3,160	348	2,812
Other Forestry	525	47	478
TOTAL	6,370	1,104	5,266

Source: Reed and Associates Ltd. (1980)

NOVA SCOTIA

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	3,143	735	2,408
Stand Tending	2,196	601	1,595
Silviculture	5,339	1,336	4,003
Forest Protection	335	--	335
Forest Access	3,723	190	3,533
Other Forestry	3,654	1,095	2,559
TOTAL	13,051	2,621	10,430

Source: Canadian Pulp and Paper Association

NOVA SCOTIA

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	2,927	1,033	1,894
Stand Tending	1,871	641	1,230
Silviculture	4,798	1,674	3,124
Forest Protection	129	--	129
Forest Access	2,777	18	2,759
Other Forestry	1,688	--	1,688
TOTAL	9,392	1,692	7,700

Source: Canadian Pulp and Paper Association

NEW BRUNSWICK

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	2,983	243	2,740
Stand Tending	4	--	4
Silviculture	2,987	243	2,744
Forest Protection	3,695	6	3,689
Forest Access	3,002	183	2,819
Other Forestry	1,512	--	1,512
TOTAL	11,196	432	10,764

Source: Reed and Associates Ltd. (1978)

NEW BRUNSWICK

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	4,072	371	3,701
Stand Tending	522	81	441
Silviculture	4,594	452	4,142
Forest Protection	2,974	263	2,711
Forest Access	3,608	184	3,424
Other Forestry	4,472	30	4,442
TOTAL	15,648	929	14,719

Source: Reed and Associates Ltd. (1980)

NEW BRUNSWICK

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	6,976	856	6,120
Stand Tending	1,109	151	958
Silviculture	8,085	1,007	7,078
Forest Protection	4,278	12	4,266
Forest Access	2,233	--	2,233
Other Forestry	7,125	--	7,125
TOTAL	21,721	1,019	20,702

Source: Canadian Pulp and Paper Association

NEW BRUNSWICK

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	4,529	1,973	2,556
Stand Tending	2,355	1,094	1,261
Silviculture	6,884	3,067	3,817
Forest Protection	1,998	144	1,854
Forest Access	3,656	--	3,656
Other Forestry	4,251	--	4,251
TOTAL	16,789	3,211	13,578

Source: Canadian Pulp and Paper Association

QUEBEC

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	1,229	53	1,176
Stand Tending	741	97	644
Silviculture	1,970	150	1,820
Forest Protection	9,145	34	9,111
Forest Access	24,791	19	24,772
Other Forestry	7,691	--	7,691
TOTAL	43,597	203	43,394

Source: Reed and Associates Ltd. (1978)

QUEBEC

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	1,609	125	1,484
Stand Tending	849	146	703
Silviculture	2,458	271	2,187
Forest Protection	7,674	--	7,674
Forest Access	32,246	3,145	29,101
Other Forestry	9,415	40	9,375
TOTAL	51,793	3,456	48,337

Source: Reed and Associates Ltd. (1980)

QUEBEC

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	2,744	503	2,241
Stand Tending	892	81	811
Silviculture	3,636	584	3,052
Forest Protection	9,433	14	9,419
Forest Access	43,398	15,425	27,973
Other Forestry	15,561	849	14,712
TOTAL	72,028	16,872	55,156

Source: Canadian Pulp and Paper Association

QUEBEC

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	4,948	1,657	3,291
Stand Tending	1,128	517	611
Silviculture	6,076	2,174	3,902
Forest Protection	12,434	1,079	11,355
Forest Access	40,056	13,838	26,218
Other Forestry	10,511	50	10,461
TOTAL	69,077	17,141	51,936

Source: Canadian Pulp and Paper Association

ONTARIO

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	1,153	428	725
Stand Tending	39	--	39
Silviculture	1,192	428	764
Forest Protection	2,552	6	2,546
Forest Access	23,850	715	23,135
Other Forestry	3,481	38	3,443
TOTAL	31,075	1,187	29,888

Source: Reed and Associates Ltd. (1978)

ONTARIO

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	838	405	433
Stand Tending	35	13	22
Silviculture	873	418	455
Forest Protection	3,443	--	3,443
Forest Access	21,234	413	20,821
Other Forestry	4,475	141	4,334
TOTAL	30,025	972	29,053

Source: Reed and Associates Ltd. (1980)

ONTARIO

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	2,593	1,533	1,060
Stand Tending	188	108	80
Silviculture	2,781	1,641	1,140
Forest Protection	4,399	38	4,361
Forest Access	32,851	14,430	18,421
Other Forestry	5,081	--	5,081
TOTAL	45,112	16,109	29,003

Source: Canadian Pulp and Paper Association

ONTARIO

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	12,686	8,250	4,436
Stand Tending	548	339	209
Silviculture	13,234	8,589	4,645
Forest Protection	7,596	281	7,315
Forest Access	33,686	19,364	14,322
Other Forestry	6,682	140	6,542
TOTAL	61,198	28,374	32,824

Source: Canadian Pulp and Paper Association

MANITOBA

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	--	--	--
Stand Tending	--	--	--
Silviculture	--	--	--
Forest Protection	40	--	40
Forest Access	757	--	757
Other Forestry	249	--	249
TOTAL	1,046	--	1,046

Source: Reed and Associates Ltd. (1978)

MANITOBA

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	45	5	40
Stand Tending	3	3	--
Silviculture	48	8	40
Forest Protection	32	--	32
Forest Access	1,362	219	1,143
Other Forestry	350	9	341
TOTAL	1,792	236	1,556

Source: Reed and Associates Ltd. (1980)

MANITOBA

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	315	315	--
Stand Tending	20	20	--
Silviculture	335	335	--
Forest Protection	40	6	34
Forest Access	1,751	--	1,751
Other Forestry	663	85	578
TOTAL	2,789	426	2,363

Source: Canadian Pulp and Paper Association

MANITOBA

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	265	265	--
Stand Tending	58	58	--
Silviculture	323	323	--
Forest Protection	33	--	33
Forest Access	1,042	48	994
Other Forestry	684	118	566
TOTAL	2,082	489	1,593

Source: Canadian Pulp and Paper Association

SASKATCHEWAN

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	324	--	324
Stand Tending	--	--	--
	324	--	324
Silviculture	313	206	107
Forest Protection	2,275	127	2,148
Forest Access	178	--	178
Other Forestry	3,090	333	2,757
TOTAL			

Source: Read and Associates Ltd. (1978)

SASKATCHEWAN

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	290	--	290
Stand Tending	--	--	--
	290	--	290
Silviculture	92	--	92
Forest Protection	2,327	--	2,327
Forest Access	393	--	393
Other Forestry	3,102	--	3,102
TOTAL			

Source: Read and Associates Ltd. (1980)

SASKATCHEWAN

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	677	--	677
Stand Tending	31	--	31
	708	--	708
Silviculture	48	--	48
Forest Protection	3,651	--	3,651
Forest Access	388	--	388
Other Forestry	4,795	--	4,795
TOTAL			

Source: Canadian Pulp and Paper Association

SASKATCHEWAN

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	921	--	921
Stand Tending	86	--	86
	1,007	--	1,007
Silviculture	40	--	40
Forest Protection	382	--	382
Forest Access	520	--	520
Other Forestry	1,949	--	1,949
TOTAL			

Source: Canadian Pulp and Paper Association

ALBERTA

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	2,048	115	1,933
Stand Tending	21	--	21
Silviculture	2,069	115	1,954
Forest Protection	865	--	865
Forest Access	8,552	--	8,552
Other Forestry	1,590	--	1,590
TOTAL	13,076	115	12,961

Source: Reed and Associates Ltd. (1978)

ALBERTA

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	1,926	--	1,926
Stand Tending	43	--	43
Silviculture	1,969	--	1,969
Forest Protection	993	--	993
Forest Access	4,289	--	4,289
Other Forestry	1,237	--	1,237
TOTAL	8,488	--	8,488

Source: Reed and Associates Ltd. (1980)

ALBERTA

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	2,947	108	2,839
Stand Tending	109	6	103
Silviculture	3,056	114	2,942
Forest Protection	703	--	703
Forest Access	4,484	--	4,484
Other Forestry	2,085	--	2,085
TOTAL	10,328	114	10,214

Source: Canadian Pulp and Paper Association

ALBERTA

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	4,962	501	4,461
Stand Tending	--	--	--
Silviculture	4,962	501	4,461
Forest Protection	1,635	3	1,632
Forest Access	6,366	--	6,366
Other Forestry	3,945	--	3,949
TOTAL	16,908	504	16,404

Source: Canadian Pulp and Paper Association

BRITISH COLUMBIA

Distribution of Industry Expenditures by Source and Activity 1977

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	10,560	5,555	5,005
Stand Tending	4,170	1,737	2,433
Silviculture	14,730	7,292	7,438
Forest Protection	3,206	1,103	2,103
Forest Access	146,448	51,730	94,718
Other Forestry	12,407	2,972	9,435
TOTAL	176,791	63,097	113,694

Source: Reed and Associates Ltd. (1978)

BRITISH COLUMBIA

Distribution of Industry Expenditures by Source and Activity 1979

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	21,505	14,400	7,105
Stand Tending	8,637	4,500	4,137
Silviculture	30,142	18,900	11,242
Forest Protection	5,743	750	4,993
Forest Access	158,686	30,400	128,286
Other Forestry	24,273	3,950	20,323
TOTAL	218,844	54,000	164,844

Source: Reed and Associates Ltd. (1980)

BRITISH COLUMBIA

Distribution of Industry Expenditures by Source and Activity 1981

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	35,761	21,045	14,716
Stand Tending	17,912	10,260	7,652
Silviculture	53,673	31,305	22,368
Forest Protection	5,119	792	4,327
Forest Access	130,358	31,819	98,539
Other Forestry	56,912	3,040	53,872
TOTAL	246,062	66,956	179,106

Source: Canadian Pulp and Paper Association

BRITISH COLUMBIA

Distribution of Industry Expenditures by Source and Activity 1983

Activity	Gross Expenditures	Recovered From Government	Net Industry
	$000's		
Regeneration	54,925	41,610	13,315
Stand Tending	4,041	3,061	980
Silviculture	58,966	44,671	14,295
Forest Protection	10,819	1,100	9,719
Forest Access	80,640	14,739	65,901
Other Forestry	61,349	2,002	59,347
TOTAL	211,774	62,512	149,262

Source: Canadian Pulp and Paper Association